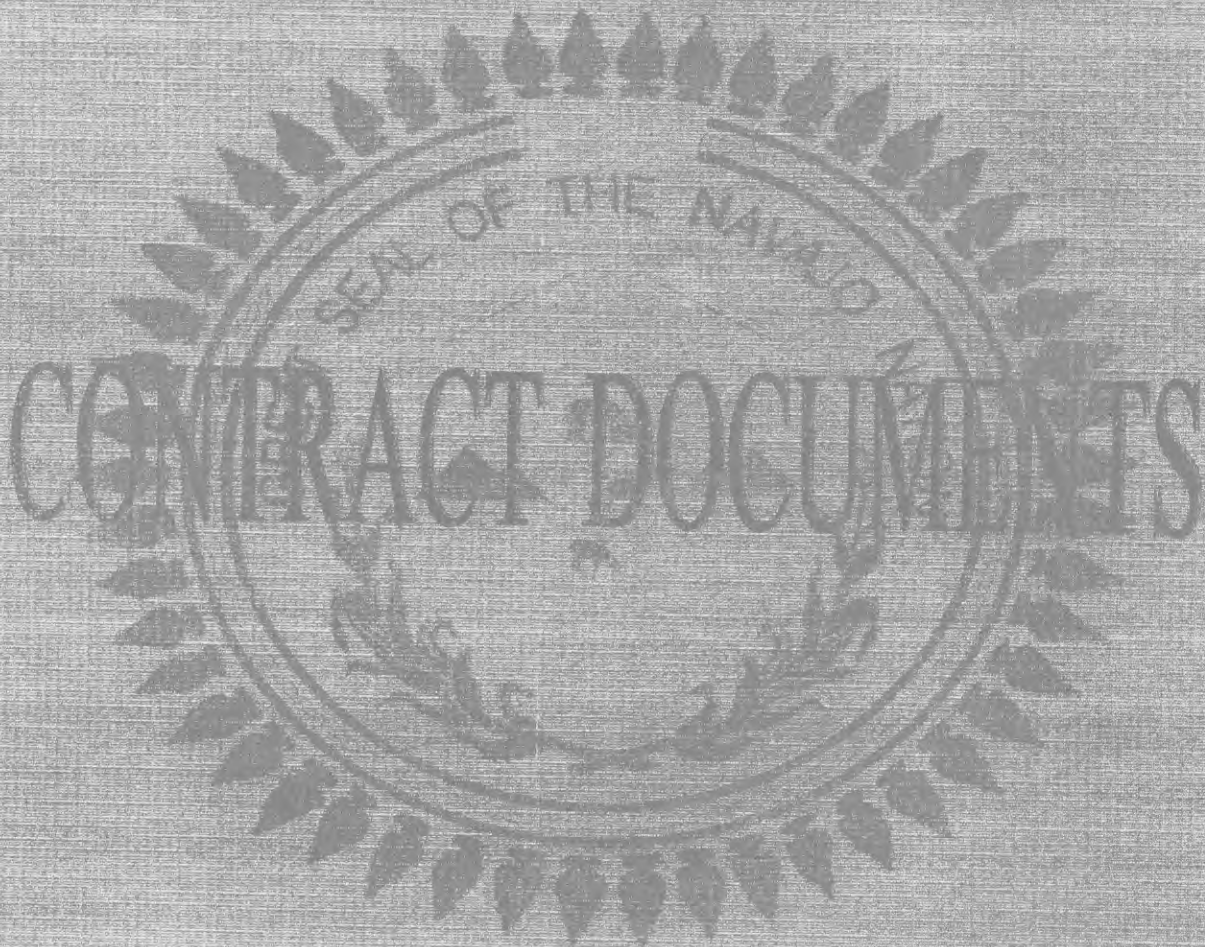


# THE NAVAJO NATION

## NAVAJO ABANDONED MINE LANDS RECLAMATION PROGRAM



### CAMERON 3 AML PROJECT CAMERON, ARIZONA

Sites

February 1997

NA 0155a & b, 163, 166,  
172a & b, 173, 174,  
175, 179, & 180

CA-014



# ***THE NAVAJO NATION***

**NAVAJO ABANDONED MINE LANDS  
RECLAMATION DEPARTMENT**

## **CONTRACT DOCUMENTS**

***CAMERON AML PROJECT 3***

***CAMERON, ARIZONA***

**FEBRUARY 1997**

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# THE NAVAJO NATION

ALBERT A. HALE  
PRESIDENT

THOMAS E. ATCITY  
VICE PRESIDENT

## MEMORANDUM:

TO : Perry H. Charley, Program Manager  
Shiprock AML Program  
Navajo AMLR Department

FROM : Alvin H. Wauneka  
Alvin H. Wauneka, Compliance Officer II  
Business Regulatory Department  
Division of Economic Development

DATE : February 3, 1997

SUBJECT: Invitation to Bid - Cameron AML Project 3

Per your request, this office has reviewed AML's Invitation to Bid (ITB) for the above subject project. The ITB is acceptable and in compliance with the requirements of the Navajo Business Preference Law (NBPL).

I will represent this office at the pre-bid meeting, as well as the bid opening. Please inform us of the dates of these meetings once they have been confirmed.

Thank you for your continued adherence to the NBPL. If you have any questions please do not hesitate to contact me (520) 871-7362 or 6718.

## CONCURRENCE:

Frank D. Nez, Jr.  
Frank D. Nez, Jr., Director  
Business Regulatory Department  
Division of Economic Development

cc: Madeline Roanhorse, Director/NAMLRD  
Project File - Cameron AML Project 3  
Chrono

*nlb* A  
FEB 1997  
RECEIVED

**INVITATION**

**TO**

**BID**

## **INVITATION TO BID CAMERON AML PROJECT 3**

The Navajo Nation (hereinafter, the "OWNER") will receive sealed LUMP SUM BIDS from General Contractors currently certified by the Navajo Business Regulatory Department for the Cameron AML Project 3, located 10 miles southeast of Cameron, Arizona. The following WORK will be performed on 11 AML sites encompassing 302 acres: 1,234,850 cu. yds. of earthwork to reclaim radioactive mine wastepiles and backfill openpits; 12,800 cu. yds. for highwall grading, and 2,844 cu. yds. for drainage; and repair on the spillway of a dike with 2,200 cu. yds. of engineered fill, 100 cu. yds. of gabion enclosed riprap, 2.0 cu. yds. of concrete and 110 sq. ft. of filter fabric.

Sealed BIDS with original signatures, with required submittals will be received at the Navajo AMLRD office, Room #215, Navajo Nation Inn Office Complex in Window Rock, Arizona until 2:00 p.m. MST, on March 13, 1997 and then publicly opened and publicly read aloud. The OWNER'S estimated Contract time is 210 CALENDAR DAYS. The BIDS will be opened in accordance with the Navajo Nation Business Preference Law (5 N.N.C. Section 201, et. seq.).

BID/CONTRACT documents may be purchased at Gallup Printing and Office Supply, Inc., (119 West Coal Ave., Gallup, NM; tel.: (505) 863-5637, attn: Kiki Alonzo) or Kwik Kopy Printing (575 Riordan Road, Flagstaff, AZ; tel.: 520-779-4171; attn.: Chris Waggoner) and may be inspected at the Navajo AMLRD office in Window Rock (520/871-6982), the Shiprock AMLRD Program (505/368-1220) or the Tuba City AML Program (520/283-3188).

A mandatory pre-bid meeting and site tour will be conducted on February 27, 1997 at the Cameron Chapter House, Cameron, Arizona beginning promptly at 9:00 a.m. MST, followed by a site tour. Failure to attend the entire meeting and tour is cause for rejection of a BID. The BIDDERS are advised to bring safety boots, protective clothing and four wheel drive vehicles due to rugged and sandy terrain.

**END OF INVITATION TO BID**

**INFORMATION**  
**TO**  
**BIDDERS**

## **INFORMATION TO BIDDERS**

### **1. RECEIPT AND OPENING OF BIDS:**

The Navajo Nation, (herein called the "OWNER"), invites qualified CONTRACTORS to submit **LUMP SUM BIDS** on the forms attached hereto. BIDDERS shall fill in all blank spaces of the forms. BIDS will be received at the Navajo Abandoned Mine Lands Reclamation Department's (NAMLRD) office, Room # 215, Navajo Nation Inn Office Complex, Window Rock, Arizona, until 2:00 p.m., MST, on Thursday, March 13, 1997 and will be promptly opened and publicly read aloud at the Division of Natural Resources Building Conference Room. The envelopes containing the BIDS must be sealed, and hand carried or mailed to the Navajo Nation Abandoned Mine Lands Reclamation Department, Division of Natural Resources, P.O. Box Drawer 1875, Window Rock, AZ 86515 and designated; "BID FOR THE CAMERON AML PROJECT 3".

Each sealed BID, plainly marked "BID FOR CAMERON AML PROJECT 3", shall contain:

- 1) The BIDDER'S current Priority status according to the latest Source List issued by the Navajo Nation Business Regulatory Department.
- 2) Information relative to the Applicant Violator System (AVS).
- 3) The BIDDER'S statement of qualifications.
- 4) The BIDDER'S list of equipment to be used to successfully complete the PROJECT.
- 5) Certified check, Cashier's check or BID BOND in the amount of 5% of the BID.

BIDDERS shall fill in all blanks and include all forms with their BID, or have the BID disqualified.

### **2. MANDATORY PRE-BID MEETING AND SITE TOUR:**

A mandatory pre-bid meeting will be held for all qualified BIDDERS on Thursday, February 27, 1997 at 9:00 a.m. (MST ) to clarify various aspects of the PROJECT as well as to allow for the inspection of the WORK sites. The meeting will be held at the Cameron Chapter, Cameron, Az. All sites in the PROJECT will be visited. Failure to attend the entire meeting will result in rejection of a BID. All BIDDERS are responsible for their personal and vehicular safety and must wear proper shoes and other appropriate attire. The OWNER is not responsible for accidents or vehicular damages during the Pre-Bid meeting and site tour.

### **3. BIDS:**

Before submitting a BID, each BIDDER shall carefully examine the MAPS/DRAWINGS, SPECIFICATIONS and other CONTRACT documents; shall visit the sites included in the WORK; shall fully inform himself or herself as to all existing conditions and limitations; and



shall include in the PROPOSAL the cost of all items included in the LUMP SUM CONTRACT.

Volume calculations shown in the summary BID SCHEDULE are estimates only. It is expressly declared that the OWNER does not guarantee the accuracy of the information or that the level of WORK encountered is the same, either in character, location or elevation as shown on the maps and drawings. It shall be the responsibility of the BIDDER to make investigations and calculations as the bidder deems necessary to determine the WORK required.

**4. BID SECURITY AND PROPOSAL GUARANTEE:**

Each BID must be accompanied by: a certified check of the BIDDER, or a BID bond prepared on the form of the BID Bond attached hereto, duly executed by the BIDDER as Principal and having as Surety thereon a surety company that meets the satisfaction of the OWNER, in the amount of 5% of the BID. All BID Bonds must be issued in the state the CONTRACTOR is licensed. Cashier's checks or BID bonds will be returned to all except the three (3) lowest BIDDERS within three (3) WORK DAYS after the opening of the BIDS. The remaining cashier's checks and BID Bonds will be returned after the OWNER and the accepted BIDDER have executed the CONTRACT. If no award has been made within thirty (30) CALENDAR DAYS after the date of the BID opening, a BIDDER's cashier's check or BID Bond will be returned upon demand of the BIDDER at any time thereafter, so long as the BIDDER has not been notified of the acceptance of its BID.

**5. SUBCONTRACTS:**

The BIDDER is specifically advised that any person, firm or other party whom the BIDDER proposes to award a SUBCONTRACT under this CONTRACT must be acceptable to the OWNER. The BIDDER, and each prospective CONTRACTOR, must demonstrate compliance with the Navajo Preference Requirements contained in the Navajo Nation Business Preference Laws (NNBPL) and the Navajo Preference in Employment Act (NPEA), and other applicable Navajo Nation laws and policies.

**6. INTERPRETATIONS OF PLANS AND SPECIFICATIONS:**

If any person contemplating submitting a BID for the proposed CONTRACT is in doubt as to the true meaning of any part of the MAPS/DRAWINGS, SPECIFICATIONS or other proposed CONTRACT documents, he or she may submit to the Director of the Navajo Abandoned Mine Lands Reclamation Department, a written request for an interpretation. Any interpretation of the proposed documents will be made only by ADDENDUM duly issued by the Director, NAMLRD. A copy of such ADDENDUM will be mailed, faxed or delivered to each BIDDER receiving a set of documents. The OWNER will not be responsible for any other explanations or interpretations of the proposed documents.

**7. ADDENDA OR BULLETINS:**

Any ADDENDUM or bulletins issued during the time of bidding shall become part of the document issued to the BIDDERS for the preparation of the BID, shall be covered in the BID and shall be made a part of the CONTRACT.

**8. BID SCHEDULE:**

Bidding CONTRACTORS shall examine the SPECIFICATIONS and the BID SCHEDULE and fill in all blanks of the CONTRACTOR'S PROPOSAL and BID SCHEDULE and submit all required information or have the BID disqualified.

**9. APPLICANT VIOLATOR SYSTEMS:**

The AVS application must be completed and attached to the BID. The application will be sent by the OWNER to the Office of Surface Mining Reclamation and Enforcement, Lexington AVS Office, to determine if the BIDDER meets the AVS requirements. Section 3 of the GENERAL CONDITIONS contained all necessary detailed information.

**10. AWARD OF THE CONTRACT:**

The CONTRACT will be awarded as soon as possible to the lowest qualified and responsible BIDDER, provided the BID is reasonable, is in the best interest of the OWNER to accept it, and the BIDDER meets the AVS requirements. The OWNER reserves the right to waive any technicalities or informalities throughout the bidding process. The total LUMP SUM cost will be utilized by the OWNER in comparing BIDS and selecting the successful BIDDER.

**11. QUALIFICATIONS:**

The OWNER will consider BIDS from CONTRACTORS who have been qualified and rated by the Navajo Nation Business Regulatory Department for the type of WORK advertised and whose names appear in the most recent Navajo Nation Business Regulatory Department's Source List. The CONTRACTOR's and SUBCONTRACTOR's past performance, organization, equipment, knowledge of mine reclamation, and ability to perform and complete their CONTRACT in the manner and within the time limit specified will be the primary elements, along with the amount of the BID, which will be considered by the OWNER in awarding the CONTRACT.

The CONTRACTOR shall possess a valid "A-General Engineering" license from the State of Arizona or a valid equivalent license from another state acceptable to the OWNER.

**12. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT:**

The successful BIDDER, upon failure to execute and deliver the CONTRACT and BONDS required within ten (10) CALENDAR DAYS after receiving notice of the acceptance of the BID, shall forfeit to the OWNER, as liquidated damages for such failure or refusal, the security deposited with the BID.

**13. TIME OF COMPLETION AND LIQUIDATED DAMAGES:**

BIDDER must agree to commence WORK on or before the date to be specific in the written "NOTICE TO PROCEED" issued by the OWNER and to fully complete the PROJECT within the CONTRACT TIME, which is subject to be negotiated with the BID PROPOSAL. BIDDER must agree to pay liquidated damages, the sum of \$800.00 for each CALENDAR DAY thereafter, as hereinafter provided in the GENERAL CONDITIONS if the PROJECT construction is not completed within the specific time, including any extension of the completion time approved by the OWNER.

**14. CONDITIONS OF WORK:**

Each BIDDER must be fully informed of the conditions relating to the construction of the PROJECT, the requirements of construction equipment relative to the project and the employment of labor. Failure to do so will not relieve a successful BIDDER of any contractual obligations, including the obligation to furnish all material and labor necessary to carry out the provisions of the CONTRACT.

**15. SECURITY FOR FAITHFUL PERFORMANCE:**

Simultaneously with delivery of the executed CONTRACT, the CONTRACTOR shall furnish a PERFORMANCE BOND and a PAYMENT BOND, for faithful performance of this CONTRACT and for the payment of all persons performing labor on the PROJECT under this CONTRACT, as specified in the GENERAL CONDITIONS herein. The PERFORMANCE BOND shall be 100% of the CONTRACT PRICE and shall remain in effect for one (1) year after the FINAL ACCEPTANCE of the WORK. The PAYMENT BOND shall be 100% of the CONTRACT PRICE, with a corporate surety approved by the OWNER, as specified in Section 4 of the INFORMATION TO BIDDERS.

**16. POWER OF ATTORNEY:**

Attorneys-in-fact who sign BID bonds or CONTRACT bonds must file with each bond a certified and dated copy of their power of attorney.

**17. LAWS AND REGULATIONS:**

The BIDDER'S attention is directed to the fact that all applicable Laws of the Navajo Nation, State laws, Federal laws, and the rules and regulations of all authorities having jurisdiction over the construction of the PROJECT shall apply to the CONTRACT throughout, and they will be deemed to be included in the CONTRACT the same as though herein written out in full.

The BIDDER's attention is called to the provisions regarding: Navajo Nation Business Preference Law (NNBPL); Navajo Preference in Employment Act; Navajo Business Activity Tax; prevailing wage rates determined by the Navajo Office of Labor Relations; requirements of the Applicant/Violators System (AVS) eligibility checks; requirements of a PAYMENT BOND and PERFORMANCE BOND, each equal to 100% of the BID amount; 10% retainage from each PROGRESSIVE PAYMENT until the acceptable completion of the WORK and approval of the final payment; requirement of a BID guarantee in the form of a firm commitment, such as a BID bond, bank money order, certified check or cashier's check made payable to the OWNER in the amount of equal to 5% of the BID amount; and the various Navajo Nation statutes and regulations governing public health and safety, the protection of environmental, cultural, archaeological and wildlife resources; and various conditions specified in the CONTRACT documents.

**18. OBLIGATION OF BIDDER:**

At the time of the opening of the BIDS, each BIDDER will be presumed to have inspected the site and to have read and become thoroughly familiar with the PLANS and CONTRACT documents (including all ADDENDUM) specifically including the Navajo Preference Requirements contained in the Navajo Nation Business Preference Laws and Navajo Preference in Employment Act. The failure or omission of any BIDDER to examine any form, instrument or document shall in no way relieve any BIDDER from any obligation with respect to its BID.

Safety and security of the personnel making site visits during the pre-bid meeting, or during any other site visit before the BID opening (which the BIDDER can do only with the written expressed permission of the OWNER, given sufficient advance notice), will be the responsibility of the BIDDER. The BIDDER is also responsible for any and all cost associated with the preparation of the BID document, including the field visit(s).

**19. CONSIDERATION OF PROPOSALS:**

The OWNER shall normally have no more than thirty (30) CALENDAR DAYS after opening BIDS to consider award of the CONTRACT, unless this time is extended for reason(s) beyond the OWNER's control. If no award is made within thirty (30) CALENDAR DAYS or within the extended period of time, all PROPOSALS shall be considered

automatically rejected.

**20. NOTICE OF SPECIAL CONDITIONS:**

Attention is particularly called to those parts of the CONTRACT documents and SPECIFICATIONS which deal with the following:

- (a) Inspection and testing of materials.
- (b) Insurance requirements.
- (c) Wage rates.
- (d) Indian Preference in subcontracting, procurement and employment.
- (e) Dispute resolution.
- (f) Sovereign Immunity.

**21. EXECUTION OF CONTRACTS:**

The CONTRACT documents shall be executed in seven (7) counterparts and shall be distributed as follows:

CONTRACTOR	1 copy
Navajo Nation	4 copies
Bonding company (if applicable)	1 copy
Office of Surface Mining	1 copy

**22. TIME ALLOWED FOR SIGNING CONTRACT:**

The successful BIDDER will be allowed ten (10) CALENDAR DAYS after the date on which the CONTRACT is awarded to him by the OWNER in which to deliver to the OWNER the signed CONTRACT, together with the required Bond, and Certificate of Insurance.

**23. WAGE SCALES:**

Wages paid on this PROJECT shall be those established by the OWNER and are included as part of the CONTRACT documents (See WR-1).

**24. BUSINESS ACTIVITY TAX:**

The CONTRACTOR will be subject to the Navajo Nation Business Activity Tax (BAT). A copy of the law imposing such tax may be obtained from the Navajo Nation Taxation Department. The cost of the BAT will be included in the CONTRACTOR's proposal and no extra payment will be allowed.



**25. QUALIFICATIONS OF BIDS:**

BIDDERS shall add no qualifying provisions to their PROPOSALS. No consideration will be given to BID qualifications.

**END OF INFORMATION TO BIDDERS**

**BID**

**PROPOSAL**

## BID PROPOSAL

NAME OF BIDDER: \_\_\_\_\_ DATE: \_\_\_\_\_

TO: The Navajo Nation Abandoned Mine Land Reclamation Department  
Room #215, Navajo Nation Inn Office Complex  
P.O. Box #1875  
Window Rock, AZ 86515

Ladies/Gentlemen:

In compliance with your INVITATION TO BID the construction RECLAMATION of the CAMERON AML PROJECT 3, the undersigned company/corporation (hereinafter the "BIDDER"), organized under the state of \_\_\_\_\_ has examined the PLANS and SPECIFICATIONS and related documents. Being familiar with the conditions surrounding the construction of the Cameron AML Project 3, BIDDER hereby proposes to furnish all labor, materials and supplies, and construct the Cameron AML Project 3 in accordance with the CONTRACT DOCUMENTS within the time set forth therein and at the LUMP SUM PRICES stated in the BID SCHEDULE. BIDDER agrees to perform all of the WORK described in the SPECIFICATIONS and MAPS/DRAWINGS for the following LUMP SUM as indicated in the attached BID SCHEDULE. These prices cover all expenses to be incurred to perform all the WORK required under the CONTRACT documents, of which this BID PROPOSAL is a part.

Should BIDDER be awarded the LUMP SUM CONTRACT, BIDDER hereby agrees to commence WORK under the CONTRACT on or before a date to be specified by the OWNER in the written "NOTICE TO PROCEED" and to fully complete the PROJECT within \_\_\_\_\_ CALENDAR DAYS thereafter.

BIDDER acknowledges receipt of the following ADDENDUM:

Enclosed are 1) BID SCHEDULE; 2) the required BID Security (Bid Bond or Cashier's Check) in the amount of U.S. \$ \_\_\_\_\_, which is 5% of the BID Amount; 3) the BIDDER'S Qualification Statement, 4) the Applicant/Violator System (AVS) Eligibility Check form and, 5) list of equipment to be used to successfully complete the PROJECT. The BIDDER'S Navajo Nation Business Preference Priority Rating is \_\_\_\_\_. BIDDER'S CONTRACTOR'S License No. \_\_\_\_\_ from the State of \_\_\_\_\_ (Arizona or other state acceptable to the OWNER), has an expiration date of \_\_\_\_\_.

**BID**

**SCHEDULE**

# BID SCHEDULE

## CAMERON AML RECLAMATION PROJECT 3

### REQUIRED WORK ITEMS WITH LUMP SUM PRICE BID:

<u>WORK ITEMS</u>	<u>UNIT</u>	<u>ESTIMATED QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL PRICE</u>
-------------------	-------------	---------------------------	-------------------	--------------------

1. Earthwork including:  
excavation of mine waste  
material and backfilling  
the openpits with the same;  
regrading reclaimed areas  
to specified contours;  
highwall grading and;  
construction of drainage  
diversions, berms, and  
ditches; and incidental  
work items.

Bank cu.yd.

1,250,494

\$ \_\_\_\_\_ \$ \_\_\_\_\_

2. Construction of a  
spillway and a portion  
of a dike with approx.  
2,200 cu.yd. of engineer-  
ed fill, 100 cu. yd. of  
gabion and gabion mat-  
tress enclosed riprap, 2  
cu. yd. of concrete and  
110 sq. yd. of filter  
fabric.

Ea.

LUMP SUM \$ \_\_\_\_\_ \$ \_\_\_\_\_

**TOTAL LUMP SUM BID PRICE:**

\$ \_\_\_\_\_

**TOTAL LUMP SUM BID PRICE WRITTEN:** \_\_\_\_\_

**PROPOSED COMPLETION TIME (Calendar Days):** \_\_\_\_\_



**PLEASE NOTE:**

1. Payment for WORK Items 1 and 2 will be based on the particular LUMP SUM BID PRICE. No WORK measurements will be made for these WORK Items and PROGRESSIVE PAYMENTS will be based on estimated percentage (%) completion of the LUMP SUM BID ITEMS according to the Schedule of Values.
2. Unit prices from the BID SCHEDULE may be utilized for payment of additional WORK under any CHANGE ORDER(S), if necessary.
3. The BIDDER must include the cost for all incidental WORK/items, such as, mobilization, demobilization, clean-up, construction of temporary ACCESS ROADS, restoration of areas disturbed by EQUIPMENT, and providing for personnel safety EQUIPMENT. No separate payment will be made for these items.
4. Volume calculations shown in the summary BID sheet are estimates only and it is espressly declared that the OWNER does not guarantee the accuracy of the information or the level of WORK encountered is the same, either in character, location or elevation as shown on the MAPS and DRAWINGS. Before BIDDING on this PROJECT, it shall be the responsibility of the BIDDER to make investigations and calculations as the BIDDER deems necessary to determine the WORK required.

Name of Company submitting BID: \_\_\_\_\_

Name of person signing bid: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**BID**

**BOND**

## BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we

(Here insert full name and address or legal title of CONTRACTOR)

as Principal, hereinafter called Principal, and

(Here insert full name and address or legal title of Surety)

Current Phone # ( ) \_\_\_\_\_

a corporation duly organized under the laws of the State of  
as Surety, hereinafter called the Surety, are held and firmly bound into

### THE NAVAJO NATION Window Rock, Arizona 86515

as Obligee, hereinafter called Obligee, in the sum of \_\_\_\_\_  
\_\_\_\_\_ Dollars and \_\_\_\_\_ cents (\$ \_\_\_\_\_)  
for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind  
ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly  
by these presents.

WHEREAS, the Principal has submitted a BID for

### CAMERON AML PROJECT 3

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a CONTRACT  
with the Obligee in accordance with the terms of such BID, and give such bond or bonds as may be specified in the  
bidding or CONTRACT Documents with good and sufficient surety for the faithful performance of such CONTRACT  
and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of  
the Principal to enter such CONTRACT and give such bond or bonds, if the Principle shall pay to the Obligee the  
difference not to exceed the penalty hereof between the amount specified in said BID and such larger amount for which  
the Obligee may in good faith contract with another party to perform the WORK covered by said BID, then this  
obligation shall be null and void, otherwise it shall remain in full force and effect.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_ 1997

\_\_\_\_\_  
(Principal)

\_\_\_\_\_  
(Seal)

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Surety)

\_\_\_\_\_  
(Seal)

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Title)

# CONTRACT

## CONTRACT

THIS AGREEMENT is made this, the \_\_\_\_\_ day of \_\_\_\_\_ 1997, by and between the Navajo Nation, hereinafter called "OWNER", and \_\_\_\_\_ located in \_\_\_\_\_, in the State of \_\_\_\_\_, hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the construction described as follows:

### CAMERON AML PROJECT 3

hereinafter, called the "PROJECT", for the sum of \_\_\_\_\_ dollars and \_\_\_\_\_ cents (\$ \_\_\_\_\_) stated in the CONTRACT; and at its own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the PROJECT in accordance with the conditions and prices stated in the BID Proposal, the GENERAL CONDITIONS and TECHNICAL SPECIFICATIONS of the CONTRACT, the PLANS, which include all MAPS, plats, blue prints, and other DRAWINGS and printed or written explanatory matter thereof, all of which are made a part hereof and collectively evidence and constitute the CONTRACT.

The CONTRACTOR hereby agrees to commence WORK under this LUMP SUM CONTRACT on or before a date to be specified in the written "NOTICE TO PROCEED" of the OWNER and to fully complete the PROJECT within \_\_\_\_\_ CALENDAR DAYS thereafter. The CONTRACTOR further agrees to pay, as liquidated damages, the sum of \$800.00 for each WORKING DAY thereafter as hereinafter provided in Sections 45 and 47 of the GENERAL CONDITIONS and Section 13 of the INFORMATION TO BIDDERS.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the CONTRACT, subject to additions and deductions, as provided in the GENERAL CONDITIONS of the CONTRACT, and to make payments on account thereof as provided in the GENERAL CONDITIONS.



In the event there are any conflicting provisions or requirements in the component parts of the CONTRACT, the CONTRACT documents and PLANS shall take precedence in the following order:

1. CONTRACT
2. TECHNICAL SPECIFICATIONS
3. GENERAL CONDITIONS
4. DRAWINGS
5. BID PROPOSAL
6. INFORMATION TO BIDDERS
7. INVITATION TO BID

Nothing contained in this CONTRACT or any document referred to herein or related to the PROJECT shall be construed as superseding or diminishing the obligations of the CONTRACTOR or any SUBCONTRACTOR from compliance with the following provisions:

- (a) The CONTRACTOR and all SUBCONTRACTORS shall strictly comply with all laws of the Navajo Nation, including the Navajo Nation Business Preference Law, the Navajo Preference in Employment Act, and the Navajo Water Code, -as well as applicable Federal and State laws:
- (b) Nothing in this LUMP SUM CONTRACT shall be interpreted as constituting a waiver, express or implied, of the sovereign immunity of the OWNER;
- (c) Jurisdiction for the enforcement of this CONTRACT and all matters related to its development and execution shall exclusively be within the Courts of the Navajo Nation.
- (d) If any part of this CONTRACT are determined to be invalid by a Court of competent jurisdiction, such determination shall not effect the validity of the remainder of the CONTRACT and the remainder of the CONTRACT shall remain in force and effect.
- (e) The obligation under this CONTRACT are subject to Force Majeure. Force Majeure shall mean the acts of God, actions of the elements, war, civil disorder, acts of a public enemy, or any other cause or causes beyond the control of the CONTRACTOR and acceptable to the OWNER.

IN WITNESS WHEREOF, the parties have executed this CONTRACT in Counterparts, each of which shall be deemed an original, in the year and day first mentioned above.

Contract Budget Information and Signature Page follow.

**CONTRACT BUDGET INFORMATION  
CAMERON AML PROJECT 3**

CONTRACT No. \_\_\_\_\_

Work Item

Construction Cost

[This information will be provided once a BID is accepted and the CONTRACT awarded.]

Total Construction Cost

\$

ACCOUNT NO. \_\_\_\_\_

Acknowledged: \_\_\_\_\_

Date: \_\_\_\_\_

**SIGNATURE PAGE FOLLOWS**

**SIGNATURE PAGE**

**ATTEST:**

**NAVAJO NATION**  
**(Owner)**

\_\_\_\_\_  
**(Secretary)**

By \_\_\_\_\_  
**(President)**

\_\_\_\_\_  
**(Witness)**

**(Seal)**


**ATTEST:**

\_\_\_\_\_  
**(Secretary)**

By \_\_\_\_\_  
**(Contractor)**

\_\_\_\_\_  
**(Witness)**

**(Seal)**



# **PERFORMANCE BOND**

**PERFORMANCE BOND**

**KNOW ALL MEN BY THESE PRESENTS:**      that

(Name of CONTRACTOR)

(Address of CONTRACTOR)

hereinafter called "Principal", and

(Name of Surety)

(Address and Phone # of Surety)

hereinafter called "Surety", are held and firmly bound unto the

**NAVAJO NATION**  
(Name of OWNER)

Navajo Nation, Window Rock, Arizona 86515  
(Address of OWNER)

hereinafter call "OWNER", in the penal sum of \_\_\_\_\_  
Dollars and \_\_\_\_\_ cents (\$\_\_\_\_\_) in lawful money of the United  
States, for the payment of which sum well and truly to be made, we bind ourselves, our  
successors and assigns, jointly and severally, firmly by these present.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a  
certain CONTRACT with the OWNER, dated the \_\_\_\_\_ day of \_\_\_\_\_, 1997, a  
copy of which is hereto attached and made a part hereof for the construction of:

**CAMERON AML PROJECT 3**

NOW, THEREFORE, the condition of this obligation is such that if the said Principal shall  
faithfully perform the CONTRACT in accordance with the PLANS, SPECIFICATIONS and  
conditions thereof, then this obligation shall be void; otherwise it shall remain in full force and  
effect.



PROVIDED, FURTHER, that Surety, for value received hereby stipulates and agrees that no changes, extensions of time, alterations or additions to the terms of the CONTRACT or to the WORK to be performed thereunder or the specifications accompanying the same shall in no way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the CONTRACT or to the work or to the TECHNICAL SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the Principal shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS HEREOF, this instrument is executed in nine (9) counterparts, each of which shall be deemed an original, this \_\_\_\_\_ day of \_\_\_\_\_, 1997.

ATTEST:

_____		_____
(Secretary)	By	(Principal)
(Seal)		_____
		(Address)

Witness as to Principal:

_____		_____
(Surety)	By	(Address)
		Attorney-in Fact

ATTEST:

_____		_____
(Seal)		
Witness as to Surety:		_____
	(Address)	
_____		
_____	(Address)	

NOTE: Date of Bond must not be prior to date of CONTRACT. If Principal is a Partnership, all partners should execute bond.

**IMPORTANT:**

Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the jurisdiction where the project is located.

**PAYMENT**

**BOND**

**PAYMENT BOND**

KNOW ALL MEN BY THESE PRESENTS: that

(Name of CONTRACTOR)

(Address of CONTRACTOR)

hereinafter called "Principal", and

(Name of Surety)

(Address and Phone # of Surety)

hereinafter called "Surety", are held and firmly bound unto the

**NAVAJO NATION**

(Name of OWNER)

Navajo Nation, Window Rock, Arizona 86515

(Address of OWNER)

hereinafter called "OWNER", in the penal sum of \_\_\_\_\_ Dollars and \_\_\_\_\_ cents (\$ \_\_\_\_\_) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain CONTRACT with the OWNER, dated the \_\_\_\_\_ day of \_\_\_\_\_, 1997, a copy of which is hereto attached and made a part hereof for the construction of:

**CAMERON AML PROJECT 3**

NOW, THEREFORE, the condition of this obligation is such that if the said Principal shall pay all claimants supplying labor or materials to him/her or his/her SUBCONTRACTORS in the prosecution of the WORK provided for in said CONTRACT, then, this obligation shall be void; otherwise it shall remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no changes, extensions of time, alterations or additions to the terms of the CONTRACT or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in no way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the CONTRACT or to the WORK or to the TECHNICAL SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the Principal shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this Instrument is executed in nine (9) counterparts, each of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_, 1997.

ATTEST:

\_\_\_\_\_  
(Secretary) By \_\_\_\_\_  
(Principal)

(Seal) \_\_\_\_\_  
(Address)

Witness as to Principal:

\_\_\_\_\_  
(Surety) By \_\_\_\_\_  
(Address)  
Attorney-in Fact

ATTEST:

\_\_\_\_\_  
(Surety) \_\_\_\_\_  
(Secretary)

(Seal) \_\_\_\_\_

Witness as to Surety \_\_\_\_\_  
(Address)

NOTE: Date of Bond must not be prior to date of CONTRACT. If Principal is a Partnership, all partners should execute bond.

**IMPORTANT:**

Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the jurisdiction where the project is located.

**PREVAILING**

**WAGE**

**SCALE**



# THE NAVAJO NATION

## OFFICE OF NAVAJO LABOR RELATIONS

PETERSON ZAH  
PRESIDENT

MARSHALL PLUMMER  
VICE PRESIDENT

### CLASSIFICATION

### HOURLY RATE

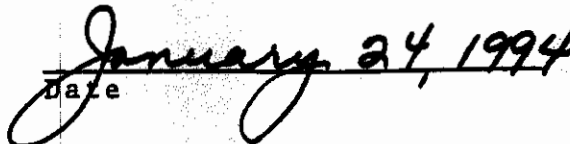
Bricklayer	\$17.00
Carpenter	\$17.00
Cement Mason	\$17.00
Plasterer	\$17.00
Plasterer Tender	\$15.00
Laborer	\$12.00
Operator: Bulldozer (D7N & larger)	\$17.70
Scraper (12 cu. yds. & larger)	\$17.70
Backhoe (8 cu. yds. & larger)	\$17.70
Wheel Loader (6 cu. yds. & larger)	\$17.70
Motor Grader	\$17.70
Truck Driver (Off-Highway): Fuel Truck	\$17.00
Dump Truck (16 cu. yds. & larger)	\$17.70
Water (5,000 gallons & larger)	\$17.70
Diesel Mechanic, Heavy Duty	\$17.00
Equipment Serviceman	\$17.00
Miller/Greaser	\$16.50
Welder	\$17.70
Body & Fenderman	\$17.70
Watchman	\$15.00
Driller	\$17.00
Driller Helper	\$15.00
Blaster	\$17.00
Blaster Helper	\$15.00
Craft Foreman	\$20.00
Superintendent	\$23.00

Unlisted classifications needed for work will be added only after review and approval by the ONLR Director. Overtime is one-and-one-half times the hourly rate for hours worked over forty hours per week.


These rates apply only to the Cameron AMLR Project 3.

### A P P R O V A L

  
Jayne E. Aspaas, Director

  
Date January 24, 1994





# **GENERAL CONDITIONS**

**NAVAJO ABANDONED MINE LANDS RECLAMATION  
DEPARTMENT**

**GENERAL CONDITIONS**

**FOR THE**

**CONTRACT DOCUMENTS**

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## **GENERAL CONDITIONS CAMERON AML PROJECT 3**

### **1. DEFINITIONS**

Whenever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural forms:

**ACCESS ROAD** - The right-of-way, the roadway and all improvements constructed thereon connecting the PROJECT site(s) to a public highway.

**ADDENDA** - Written or graphic instruments issued prior to the execution of the CONTRACT DOCUMENTS which modify or interpret the CONTRACT DOCUMENTS, by additions, deletions, clarifications or corrections.

**ADVERTISEMENT** - A public announcement inviting BIDS for WORK to be performed and materials to be furnished.

**AWARD** - The acceptance, by the OWNER, of a BIDDER's PROPOSAL.

**APPLICANT VIOLATOR SYSTEM (AVS)** - a Nationwide database containing surface coal mining ownership, control and violation. AVS is used by the Office of Surface Mining Reclamation and Enforcement (OSMRE) to determine whether the CONTRACTOR to mine coal are linked by ownership or control to uncorrected environmental violations, including whether the CONTRACTOR owes the U.S. Government money from unpaid penalties or fees.

**BID** - The offer or PROPOSAL of a BIDDER for the WORK to be performed.

**BIDDER** - Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the WORK contemplated.

**BID SECURITY** - The security furnished with a PROPOSAL to guarantee that the BIDDER will enter into a CONTRACT if his PROPOSAL is accepted by the OWNER.

**BID SCHEDULE** - The prescribed BID form setting forth the prices of individual items of the WORK to be performed.

**CALENDAR DAY** - Every day shown on the calendar.

**CHANGE ORDER** - A written order to the CONTRACTOR, authorizing an addition, deletion or revision in the WORK within the general scope of the CONTRACT

DOCUMENTS, or authorizing an adjustment in the PRICE or COMPLETION TIME.  
**CONTRACT DOCUMENTS** - The CONTRACT, including but is not limited to, INVITATION TO BID, INFORMATION FOR BIDDERS, BID SCHEDULE, BID BOND, PERFORMANCE and PAYMENT BONDS, GENERAL CONDITIONS, TECHNICAL SPECIFICATIONS, DRAWINGS/MAPS, ADDENDA and if applicable, joint venture agreement(s).

**CONTRACT ITEM (PAY ITEM)** - A specific unit of WORK for which a price is identified.

**CONTRACT PRICE** - The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.

**CONTRACT TIME** - The number of CALENDAR DAYS stated in the CONTRACT DOCUMENTS for the completion of the WORK.

**CONTRACTOR** - The person(s), firm(s) or corporation(s) with whom the OWNER has executed the CONTRACT.

**DRAWINGS/MAPS** - The part of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed.

**ENGINEER** - The individual duly authorized by the OWNER to be responsible for engineering supervision of the WORK and acting through the PROJECT MANAGER.  
**EQUIPMENT** - All machinery, together with the necessary supplies for upkeep and maintenance; also all tools and apparatus necessary for the proper construction and acceptable completion of the WORK.

**FIELD ORDER** - A written order from the PROJECT MANAGER effecting a change in the WORK, not involving an adjustment in the CONTRACT PRICE or an extension of the COMPLETION TIME, issued by the OWNER to the CONTRACTOR during construction.

**FINAL INSPECTION** - The last inspection jointly carried out by the representatives of the OWNER and the CONTRACTOR to ensure satisfactory completion of WORK under the CONTRACT before the OWNER accepts the completed PROJECT WORK.

**HEALTH PHYSICIST** - The individual duly authorized by the OWNER to be responsible for all radiological and health physics application/supervision of the WORK and acting directly or through the PROJECT MANAGER.

**INSPECTOR** - An authorized representative of the **ENGINEER** and **PROJECT MANAGER** assigned to make all necessary inspection and/or tests of the **WORK** performed or being performed, or of the materials furnished or being furnished by the **CONTRACTOR**.

**INTENTION OF TERMS** - Whenever the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of the like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the **ENGINEER** is intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import, shall mean approved by, or acceptable to, or satisfactory to the **ENGINEER**, subject in each case to the final determination of the **OWNER**.

Any reference to a specific requirement of a numbered paragraph of the **CONTRACT SPECIFICATIONS** or a cited standard shall be interpreted to include all general requirements of the entire section, **SPECIFICATION** item, or cited standard that may be pertinent to such specific reference.

**MATERIALS** - Any substance specified for use in the construction of the **CONTRACT WORK**.

**NAMLRD** - Navajo Abandoned Mine Land Reclamation Department.

**NOTICE OF FINAL ACCEPTANCE** - The Notice issued by the **OWNER** to the **CONTRACTOR** after the **FINAL INSPECTION** indicating the acceptance of the completed **PROJECT WORK** in accordance with the **CONTRACT**, **TECHNICAL SPECIFICATION** and **MAPS/DRAWINGS**.

**NOTICE TO PROCEED** - Written communication issued by the **OWNER** to the **CONTRACTOR** authorizing the **CONTRACTOR** to proceed with the **WORK**.

**OWNER** - The Navajo Nation, acting through the Navajo Abandoned Mine Land Reclamation Department (**NAMLRD**).

**PAYMENT BOND** - A **PAYMENT BOND** is one executed in connection with a **CONTRACT** to assure payment as required by law of all persons supplying labor and materials in the execution of the **WORK** provided for in the **CONTRACT**.

**PERFORMANCE BOND** - A **PERFORMANCE BOND** is one executed in connection with a **CONTRACT** to secure fulfillment of all the **CONTRACTOR's** obligations under

such CONTRACT.

**PLANS** - The official DRAWINGS or exact reproductions, approved by the ENGINEER, which show the location, character, dimensions and details of the WORK to be done and which are to be considered as a part of the CONTRACT, supplementary to the SPECIFICATIONS.

**PROJECT** - The agreed scope of WORK for accomplishing the objectives of the AML PROJECT.

**PROGRAM MANAGER** - Immediate supervisor to the PROJECT MANAGER.

**PROGRESSIVE PAYMENT** - 90% of approved invoice(s) payable according to the CONTRACT documents.

**PROJECT MANAGER** - The authorized field representative of the OWNER assigned to the PROJECT site or any part thereof.

**PROPOSAL** - The written offer of the BIDDER, submitted on the approved PROPOSAL form, to perform the contemplated WORK and to furnish the necessary materials in accordance with the provisions of the PLANS and SPECIFICATIONS.

**PUNCH LIST** - A list prepared by the OWNER and accepted by the CONTRACTOR indicating the WORK still required to be performed by the CONTRACTOR to complete the WORK under the CONTRACT.

**RECLAMATION** - The process of returning a disturbed site to a condition which will be approximately equal to or greater than that prior to disturbance.

**RECLAMATION SPECIALIST II** - The PROJECT MANAGER.

**RECLAMATION SPECIALIST III** - The authorized Field ENGINEER of the OWNER assigned to the PROJECT site or any part thereof, coordinates all phases of activities of the PROJECT with the PROJECT MANAGER and the Department ENGINEER, and supervised by the PROGRAM MANAGER.

**RETAINAGE** - Ten percent (10%) of each PROGRESSIVE PAYMENT retained by the OWNER from the CONTRACTOR to assure that the WORK is performed in accordance with the CONTRACT DOCUMENTS.



**SPECIFICATIONS** - A part of the **CONTRACT DOCUMENTS** consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship for the **PROJECT**.

**SUBCONTRACTOR** - An individual, firm or corporation having a direct contract for services with the **CONTRACTOR** or with any other **SUBCONTRACTOR** for the performance of any part of the **WORK** at the site.

**SUPERINTENDENT** - An individual, designated in writing by the **CONTRACTOR**, as the **PROJECT** Supervisor, who shall have full authority to act on behalf of the **CONTRACTOR**. The **OWNER** reserves the right to approve the assigned **SUPERINTENDENT**.

**SURETY** - The corporation, partnership, **CONTRACTOR**'s individual or other entity, other than the **CONTRACTOR**, obligated to execute payment of **PERFORMANCE BONDS** in the event the **CONTRACTOR** breaches its contractual obligations.

**TECHNICAL SPECIFICATIONS** - See "SPECIFICATIONS".

**WARRANTY PERIOD** - Two (2) years from the date of **PROJECT** completion (inclusive).

**TRIBE/TRIBAL** - The Navajo Nation.

**WORK** - The activities required to fulfill the **CONTRACT**. All **WORK** required to perform in accordance with the **SPECIFICATIONS** as well as stipulations issued by the Navajo Fish and Wildlife Department, the Historic Preservation Department and the Archaeology Department of the Navajo Nation government.

**WORKING DAY** - A **WORKING DAY** shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the **CONTRACTOR** may proceed with regular **WORK** for at least 6 hours toward completion of the **CONTRACT**.

**WRITTEN NOTICE** - Any notice relative to any part of this **CONTRACT** in writing, considered delivered and served when posted by certified or registered mail to the **CONTRACTOR**'s last given address or delivered in person to the **CONTRACTOR** or an authorized representative of the **CONTRACTOR**.

**2. LICENSE REQUIREMENT**

The CONTRACTOR shall possess a valid "A-General Engineering" license from the State of Arizona or a valid equivalent license from any other state acceptable to the OWNER.

**3. APPLICANT VIOLATOR SYSTEM (AVS)**

- A. Federal regulations (30 CFR 874.16, effective July 1, 1994) makes a CONTRACTOR with outstanding unabated violations under the Surface Mining Control and Reclamation Act ineligible to receive a Title IV Abandoned Mine Lands Reclamation CONTRACT. The regulations further require that the CONTRACTOR's eligibility be confirmed by the Applicant Violator System (AVS) maintained at the U.S. Office of Surface Mining (OSM). Compliance checks are also required for any SUBCONTRACTOR receiving 10% or more of the total CONTRACT AMOUNT.
- B. To comply with the above regulation, prospective BIDDERS shall submit along with the BID package to the OWNER all information pertinent to the ownership and control of the BIDDER for AVS review. The OWNER will determine which AVS applications will be forwarded to the Office of Surface Mining Reclamation and Enforcement (OSM), Lexington AVS Office along with the Recommendation Request Form, for the required compliance check. The BIDDERS may either submit a notarized copy of the "AML Contractor Ownership and Control Information Package" (in case the BIDDER has not submitted a package before) or else a copy of the "AML Contractor Ownership and Control Data Certification" updating and certifying previously submitted information. The OWNER will provide forms for these submissions. The application package must be fully completed. The forms are self-explanatory.
- C. OSM's review is expected to be completed within 72 hours if the ownership and control data entry is complete in all respects. If there are any questions or need for additional information on the AVS application, Lexington AVS Office may directly contact the BIDDER or the OWNER to accurately complete the application. The Lexington AVS Office will provide the recommendations as follows: 1) An "Issue" recommendation when the company, its owners, officers or controllers applying for an Abandoned Mine Lands Reclamation Contract are not associated with any outstanding violations; 2) a "Conditional Issue" recommendation when the violations are under appeal, pending appeal, part of a settlement agreement or protected by bankruptcy regulations; or 3) a "Deny" recommendation when there are outstanding or unabated violations. In the event of a "Deny" recommendation, a list of the violations and a contact person for the agency, Indian Tribe or State where the violations were written will be provided.

- D. **BIDDERS** may choose to submit the required information prior to submitting the **BID PROPOSAL** in order to facilitate data entry by **OSM** and expedite the **AVS** review and **CONTRACT** Award processes.

4. **CERTIFICATES OF INSURANCE**

- A. The **CONTRACTOR** shall procure and maintain the insurance described in this provision at its own expense. Certificates of Insurance in the amounts specified below is required prior to commencement of **WORK** on this **PROJECT**:

- (1) Worker's Compensation and Occupational Disease Insurance in full compliance with all **TRIBAL**, Federal and applicable State laws and providing coverage for all risks to which the **CONTRACTOR**'s employees are exposed while engaged in the performance of **WORK** under the **CONTRACT**;
- (2) Employer's Liability Insurance in the minimum amount of \$1,000,000 per occurrence;
- (3) Comprehensive General Liability Insurance for bodily injury, death, or loss of or damage to property of third persons in the minimum amount of \$5,000,000 per occurrence, including contractual liability insurance; and
- (4) Automobile Liability Insurance covering owned, non-owned, and hired automotive equipment and including loading and unloading in the minimum amount of \$1,000,000 per occurrence.

- B. The **CONTRACTOR** shall furnish the **OWNER** with certificates of insurance evidencing such coverage acceptable to the **OWNER'S** Risk Management Office and authorized to do business within the Navajo Nation. The **CONTRACTOR** shall have ten (10) **CALENDAR DAYS** after receipt of the **NOTICE OF CONTRACT AWARD** in which to provide acceptable certificate of insurance coverage to the **OWNER**. Failure to provide coverage will result in forfeiture of the **BID BOND** and the **CONTRACT AWARD** will be made to the next responsive low **BIDDER**. Insurance policy effective dates must cover the full length of the **CONTRACT TIME** or until the **PROJECT WORK** is complete and the Notice of **FINAL ACCEPTANCE** is issued, whichever is longer. The **CONTRACTOR** must provide ten (10) **CALENDAR DAYS WRITTEN NOTICE** to the **OWNER** should any insurance policy be cancelled before the expiration date.
- C. Replacement certificates to the **OWNER** for each new policy year and for each and every change of insurer or change in the coverage provided must be provided to the **OWNER**.

The certificates shall contain a statement that such policies shall not be materially changed or cancelled within at least ten (10) CALENDAR DAYS prior WRITTEN NOTICE to the OWNER.

- D. The provision of insurance required of the CONTRACTOR by the CONTRACT documents shall in no way release the CONTRACTOR from its obligations for the safety of personnel, property and equipment and to this end the CONTRACTOR shall provide all necessary personnel and employ approved methods.

## **5. PERFORMANCE AND PAYMENT BONDS**

- A. PAYMENT and PERFORMANCE BONDS are required each being equal to 100% of the CONTRACT PRICE. The PERFORMANCE BOND shall remain in effect for one (1) year after the FINAL ACCEPTANCE of the WORK and until the date on which all necessary repairs or replacements to correct faulty materials or workmanship are completed.
- B. The PAYMENT BOND shall remain in effect until such claim(s) for payment, if any, by third parties against the CONTRACTOR are settled. The PAYMENT BONDS shall be filed in the appropriate office acceptable to the OWNER. The Surety for the PAYMENT BOND shall be licensed to conduct business in the state(s) where the PROJECT is located.
- C. If the Surety on any bond furnished by the CONTRACTOR should file a petition in bankruptcy seeking reorganization or liquidation, the CONTRACTOR shall notify the OWNER immediately by telephone and a written notification sent by certified mail. If the right of the Surety to do business in the state(s) is revoked, suspended or terminated, the CONTRACTOR shall within five (5) CALENDAR DAYS thereafter substitute another bond and surety, both acceptable to the OWNER.
- D. The apparent successful BIDDER shall have ten (10) calendar days after receipt of a NOTICE OF CONTRACT AWARD in which to provide acceptable PERFORMANCE and PAYMENT BONDS to the OWNER. Failure to do so will result in forfeiture of the BID BOND and the CONTRACT Award shall be made to the next responsive low BIDDER.

## **6. SUBCONTRACTING**

- A. The CONTRACTOR shall not award WORK to SUBCONTRACTOR(S), without prior written approval of the OWNER.

- B. The CONTRACTOR shall be fully responsible to the OWNER for the acts and omissions of the SUBCONTRACTORS and of persons directly or indirectly employed by the SUBCONTRACTORS, as if they were employed by the CONTRACTOR directly.
- C. The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontract Agreements relative to the WORK to bind the SUBCONTRACTOR(S) to the CONTRACTOR by the terms and conditions of the CONTRACT DOCUMENTS and to give the CONTRACTOR the same power with regard to terminating any subcontract that the OWNER may exercise over the CONTRACTOR under any provision of the CONTRACT DOCUMENTS. A copy of the executed Agreement between the CONTRACTOR and the SUBCONTRACTOR shall be furnished to the OWNER.

## **7. PRE-BID MEETING**

A formal meeting and site visit provided so that potential BIDDERS can become familiar with the AML staff and the PROJECT. The pre-bid meeting will give the BIDDERS opportunity to ask questions and receive clarification on technical and administrative issues. The site visit will allow the BIDDERS to submit accurate BIDS. Attendance at both the meeting and the site visit is mandatory. Non-attendance at either session will cause the OWNER's rejection of the BID package.

## **8. ESTIMATED WORK QUANTITIES**

The quantities of the various WORK items shown in the BID SCHEDULE, TECHNICAL SPECIFICATIONS and MAPS/DRAWINGS have been carefully determined using customary measurements and calculation techniques. The quantities should be considered as estimates within reasonable limits of error. Determinations of the quantities has been made with reasonable care. WORK items expressed in *Linear Feet* and *Acre* are based on direct measurements. Earthwork quantities for excavation of mine waste, topsoil/other borrow material, channel/ditches, and backfilling are in *Bank Cubic Yards* units with no allowance for double handling. Earthwork for berms and dikes are for compacted volumes.

The quantities of the various WORK items are meant to serve as a guide for the BIDDERS to come up with the LUMP SUM BID PRICE for the respective WORK items. The BIDDERS must understand fully that this is a LUMP SUM PROJECT and no work measurement will be done during construction. By submitting the LUMP SUM BID PRICES for the various WORK items, the BIDDERS agree not to claim any additional compensation for these WORK items during the execution of the CONTRACT except in extraordinary situations as provided in *Section 39: CLAIMS FOR ADJUSTMENT AND DISPUTES*. The BIDDERS are thus encouraged to make such investigations and calculations, at their own cost, as they consider necessary to verify the

WORK quantities before bidding. In case of any dispute over a WORK item, the BIDDER shall bring it to the attention of the OWNER before bidding for appropriate action.

Once a CONTRACTOR has been awarded the CONTRACT and the WORK has started, the CONTRACTOR can dispute any WORK quantity by submitting the measurement(s) for the disputed WORK performed by a Registered Surveyor for OWNER's review and action. The OWNER will consider a change in any WORK quantity only if the resurvey performed by the CONTRACTOR in accordance with Section 39 results in a change exceeding 15% of the original estimate. If site conditions change materially, the OWNER also reserves the right to resurvey any WORK item and make adjustments if a measured quantity is lower than the original estimated quantity by more than 15%. In other words, any quantity adjustment shall be based upon an increase or decrease due solely to variations above 115% or below 85% of the estimated quantity.

## **9. NOTICE TO PROCEED**

A. Upon receipt of the NOTICE TO PROCEED, the CONTRACTOR shall have ten (10) CALENDAR DAYS to mobilize equipment to the site. WORK shall commence in accordance with the SPECIFICATIONS and DRAWINGS. The CONTRACTOR shall provide the PROJECT MANAGER with the following before the WORK commences:

1. A progress schedule for the proposed WORK in calendar form and proposed work hours in the specified sequence of WORK.
2. A list of personnel to be employed on the PROJECT, in conformance to the Navajo Preference in Employment Act.
3. A Health and Safety Plan to be approved by the OWNER, including rapid communication procedures with the closest available emergency response units and medical centers and provide a written statement to the OWNER that these requirements have been met.
4. Proof of all permits, licenses, BONDS, Certificate of Insurance and all other such items as may be required by the CONTRACT documents.
5. An updated list of equipment to be used to successfully complete the PROJECT. All equipment are required to be inspected, documented and approved by the OWNER prior to their usage on the PROJECT.
6. Qualifications and resumes of key personnel for the PROJECT for the OWNER's approval. The OWNER reserves the right to approve the assigned SUPERINTEN-

DENT.

7. **CONTRACTOR's Chain of Command for the PROJECT.**
  8. **Notice of SUBCONTRACTORS to be retained for the performance of the CONTRACT and subject to the OWNER's approval.**
  9. **Schedule of Values to be coordinated with the OWNER.**
- B. **Prior to commencement of the WORK, the CONTRACTOR shall be in compliance with provisions set forth by all applicable Navajo Nation, federal and state laws including, but not limited to, the Navajo Preference in Employment Act, Navajo Business Preference Law, tax laws, cultural resources laws, historic preservation laws, environmental laws, and threatened and endangered species laws.**
- C. **The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the WORK, or the restoration of any damaged WORK, except such as may be caused by agents or employees of the OWNER.**
- D. **The CONTRACTOR shall notify the PROJECT MANAGER at least 24 hours in advance of the time actual construction operations begin. The CONTRACTOR shall not commence any actual construction prior to the date on which the NOTICE TO PROCEED is issued.**

#### **10. SCHEDULE OF VALUES**

**Prior to beginning construction, a Schedule of Values will be developed cooperatively between the CONTRACTOR and the OWNER upon which the CONTRACTOR is to invoice the OWNER for WORK performed. The Schedule of Values will be determined based upon the CONTRACTOR's BID.**

#### **11. MATERIALS, SERVICES, AND FACILITIES**

**It is understood that, except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature necessary to execute, complete, and deliver the WORK within the specified time.**

## **12. PERMITS**

The CONTRACTOR is responsible for obtaining and paying for a water-use permit from the Navajo Nation Water Resource Management Department for the water necessary to execute the WORK in accordance with the TECHNICAL SPECIFICATIONS, as well as any other permits required by TRIBAL, federal, and if applicable, state law. The CONTRACTOR is responsible for obtaining all necessary rights-of-way.

## **13. CONTRACT DOCUMENTS**

The CONTRACTOR shall keep one (1) record copy of all CONTRACT DOCUMENTS, including all TECHNICAL SPECIFICATIONS, PLANS, DRAWINGS, MAPS, ADDENDA, CHANGE ORDERS, FIELD ORDERS, and any other documents pertinent to the WORK at the PROJECT site in good order and annotated to show all changes made during the construction process.

## **14. TECHNICAL SPECIFICATIONS, MAPS, AND DRAWINGS**

- A. The CONTRACTOR shall furnish all labor, materials, tools, equipment, transportation, and all incidental WORK necessary for the proper execution of the WORK to complete the PROJECT in an acceptable manner in accordance with the CONTRACT DOCUMENTS to which the TECHNICAL SPECIFICATIONS, MAPS, AND DRAWINGS are parts thereof. Any questions regarding the ABOVE DOCUMENTS shall be addressed, in writing, to the PROJECT MANAGER. The OWNER has determined how RECLAMATION activities should proceed and shall set the sequence of site RECLAMATION.
- B. In case of conflict between the MAPS/DRAWINGS and TECHNICAL SPECIFICATIONS, the TECHNICAL SPECIFICATIONS shall govern.
- C. Any discrepancies found between the MAPS/DRAWINGS and TECHNICAL SPECIFICATIONS shall be immediately reported to the PROJECT MANAGER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. WORK done by the CONTRACTOR after discovery of such discrepancies, inconsistencies or ambiguities shall be done solely at the CONTRACTOR's risk.
- D. All WORK and all materials furnished shall be in conformity with the lines, grades, grading sections, cross sections, dimensions, materials requirements, and testing requirements that are specified (including specified tolerances) in the CONTRACT, TECHNICAL SPECIFICATIONS, MAPS and DRAWINGS.



- E. If the PROJECT MANAGER, in consultation with the RECLAMATION SPECIALIST III and the ENGINEER, finds the materials furnished, WORK performed, or the finished product are not in reasonably close conformity with the TECHNICAL SPECIFICATIONS, MAPS and DRAWINGS, and have resulted in an unacceptable finished product, the affected WORK or materials shall be removed and replaced or otherwise corrected by and at the expense of the CONTRACTOR in accordance with the ENGINEER's and PROJECT MANAGER's and RECLAMATION SPECIALIST III's written orders.

## **15. MEASUREMENT OF WORK QUANTITIES**

WORK items on this project are LUMP SUM, therefore no WORK measurements will be performed by the OWNER during the construction WORK. Any additional WORK related to a CHANGE ORDER under the CONTRACT may be measured by the ENGINEER, or an authorized representative of the OWNER, using United States Customary Units of Measurement.

The method of measurement and computations to be used in the determination of quantities of material furnished and of WORK performed under the CONTRACT shall be those methods generally recognized as conforming to acceptable engineering practices.

In computing volumes of excavation, the average end area method or other acceptable method(s) shall be used. Volumes of earthwork based on load counts are not acceptable. Aerial photogrammetric survey may be used for determination of earthwork volumes of waste piles or any other earthwork. Areas shall be measured in horizontal planes using topographic maps and field surveys.

## **16. PARTNERING**

Partnering process will be established in this project. Partnering is a project management concept which focuses the CONTRACTOR and the OWNER through mutual cooperation and teamwork on the following: (1) productivity by considering innovative approaches to meet or beat the budget and CONTRACT TIME; (2) safety; (3) quality; and (4) expediency in dispute resolution at the very early stage. Partnering is a strategy for success which virtually eliminates/ reduces: time and cost growth (or CHANGE ORDERS involving cost and CONTRACT TIME extension); paperwork; claims; and conflicts between the OWNER and CONTRACTOR. It creates a common objective to finish the PROJECT within time and budget with utmost safety and environmental compliance. It involves cooperative commitment, trust and equity to develop a "win-win" relationship to avoid disputes and delays and to eliminate the adversarial approach to construction contracting. It is an informal relationship separate from the contractual relationship between the parties. The establishment of partnering will not change the legal relationship of the parties to the CONTRACT nor relieve any party from any of the terms and conditions of the

## **CONTRACT.**

A team will be formed for this purpose consisting of OWNER's and CONTRACTOR's representatives. Partnering team will meet periodically, or upon necessity, to discuss various issues and the solution to problems. Project decision and recommendations shall be made at the lowest possible management level of the PROJECT. If PROJECT personnel cannot come to a mutual agreement, the disputed item/issue shall be elevated to the next higher level of management authority for consideration. The disputed item/issue shall move up the levels of management, as determined by the partnering team, until a decision is reached.

### **17. DELIVERY, STORAGE, AND HANDLING**

- A. The CONTRACTOR shall be responsible for the delivery, storage and handling of all items and materials used in performing the WORK.
- B. The CONTRACTOR shall be responsible for all materials used in conjunction with the WORK until said WORK is accepted and approved by the PROJECT MANAGER, in consultation with the PROGRAM MANAGER and shall warrant all materials as required by the SPECIFICATIONS and Quality Assurance.

### **18. SCHEDULES, REPORTS, AND RECORDS**

- A. The CONTRACTOR shall submit to the OWNER, upon request, such schedules of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable as are required by the CONTRACT DOCUMENTS for the WORK to be performed.
- B. Prior to the first partial payment estimate, the CONTRACTOR shall submit construction progress schedules showing the order in which the various parts of the WORK will begin and the estimated date of completion of each part.

### **19. HEALTH PHYSICS**

The HEALTH PHYSICIST is responsible to provide instruction for carrying out RECLAMATION activities in and around AML sites where radiation contamination is identified. All rules of the Health Physics Program applies to all personnel and individuals entering radioactive contaminated areas at the PROJECT site.

**20. PROTECTION AND SAFETY OF WORKERS, PROPERTY, AND PERSONS**

- A. The CONTRACTOR is responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the WORK. The CONTRACTOR is responsible for the workers' safety and shall ensure proper training including, but not limited to, safety training and first aid training. The CONTRACTOR will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss, to all employees and other persons who may be affected thereby. All materials or equipment, whether in storage on or off the site, and other property at the site or adjacent thereto, not designated for removal, relocation or replacement in the course of construction shall be placed with the protection and safety of workers, property and persons in mind.

The CONTRACTOR shall be responsible for organizing and operating first aid facilities for its own employees. The CONTRACTOR and its workers shall attend the mandatory safety and radiation protection training provided by the OWNER. The CONTRACTOR shall provide Thermoluminescent dosimetry badges to all its workers for radiation monitoring, obtain bioassay sampling from its workers and provide personal protective equipment, such as hard hat, steel-toe boots, air filter, goggles, red colored vest etc. as instructed by the Health Physicist. The CONTRACTOR shall comply with all applicable provisions of Occupational Safety and Health Act.

- B. The CONTRACTOR will erect and maintain, as required by the conditions and progress of the WORK, all necessary safeguards and protection. The CONTRACTOR will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the CONTRACTOR, or anyone directly or indirectly employed by the CONTRACTOR or anyone for whose acts the CONTRACTOR is liable, except damage or loss attributable to the acts or omissions of the OWNER or the OWNER's employees or anyone for whose acts the OWNER may be liable, or not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the CONTRACTOR.

Where needed, the CONTRACTOR shall provide tire-high safety berms on sloping haul roads to prevent equipment rolling down off the roads. The CONTRACTOR shall notify the OWNER of adjacent utilities when the work's prosecution may affect them.

- C. In emergencies affecting the safety of persons or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the PROJECT MANAGER, shall act to prevent threatened damage, injury or loss. The CONTRACTOR will give the PROJECT MANAGER prompt WRITTEN NOTICE of any proposed changes in WORK or deviations from the CONTRACT DOCUMENTS caused thereby.

- D. Due to the dangerous nature of the abandoned mine land areas, unauthorized visits to the PROJECT areas are strictly prohibited. Unauthorized visitors include, but are not limited to, family members, friends of the CONTRACTOR or its employees, officials of the CONTRACTOR not directly associated with the PROJECT, and onlookers. Under no circumstances are such unauthorized individuals allowed on any AML job site without prior written approval from the OWNER.
- E. The CONTRACTOR shall warrant that it has examined the site of the work and is fully aware of the physical hazards that exist in performing the WORK in an area of abandoned mines and associated mine workings.
- F. The provision of insurance required of the CONTRACTOR by the CONTRACT DOCUMENTS shall in no way release the CONTRACTOR from its obligations for safety of personnel, property and equipment and to this end the CONTRACTOR shall provide all necessary personnel and employ approved methods.

## **21. INDEMNIFICATION**

- A. The CONTRACTOR shall indemnify and hold harmless the OWNER, its agents and employees from and against all claims, damages, losses and expenses, including attorney fees, arising out of or resulting from the performance of the WORK, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or injury to or destruction of tangible property, including resulting loss or use and is caused in whole or in part by any negligent or willful act or omission BY the CONTRACTOR and/or the SUBCONTRACTOR or anyone directly or indirectly employed by them or anyone for whose acts they may be liable.
- B. In any and all claims against the OWNER, or any of the OWNER's agents or employees, by any employee of the CONTRACTOR, any SUBCONTRACTOR, anyone directly or indirectly employed by them or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under workmen's compensation acts, disability benefit acts or other employee benefit programs.

## **22. EMERGENCY MEDICAL RESPONSE**

- A. The PROJECT SUPERINTENDENT must identify and develop rapid communication procedures with the closest available emergency medical response units and medical center and provide a written statement to the OWNER that this requirement has been met. All

workers shall be educated about emergency response procedures.

- B. The CONTRACTOR shall designate a responsible member of its workforce, preferably the SUPERINTENDENT, whose duty shall be ensuring compliance with applicable safety laws, regulations and procedures and the prevention of accidents.

## **23. ACCIDENTS**

The WORK shall stop immediately and the PROJECT MANAGER and the PROGRAM MANAGER be notified immediately if an accident occurs or upon discovery of a hazard that threatens the safety of workers or the public. WORK shall resume only after authorization is secured in writing by the CONTRACTOR from the PROGRAM MANAGER.

## **24. ENVIRONMENTAL DAMAGE**

The PROJECT MANAGER, as well as the PROGRAM MANAGER shall be notified immediately of any situation which may cause environmental damage. The CONTRACTOR must take prompt and appropriate action to alleviate the situation.

## **25. SUPERVISION BY CONTRACTOR**

The SUPERINTENDENT shall have full authority to act on behalf of the CONTRACTOR and all communications given to the SUPERINTENDENT shall be as binding as if given to the CONTRACTOR. The SUPERINTENDENT shall be present on the site at all times as required to perform adequate supervision and coordination of the WORK. The SUPERINTENDENT shall have the understanding and working knowledge and experience of the AML terminologies and mine closure methods used in AML PROJECTS.

## **26. CHARACTER OF WORKERS, METHODS, AND EQUIPMENT**

The CONTRACTOR shall, at all times, employ sufficient labor and equipment for completing the WORK in the manner and time required by the CONTRACT DOCUMENTS.

All equipment which is proposed to be used on the WORK shall be of sufficient size and in such mechanical condition as to meet requirements of the WORK and to produce satisfactory quality. Equipment used on any portion of the WORK shall be such that no disturbance to previously completed WORK, adjacent property, or facilities will result from its use.

When the TECHNICAL SPECIFICATIONS require the use of certain methods and equipment, such methods and equipment shall be used.

When the methods and equipment to be used by the CONTRACTOR in accomplishing the WORK are not prescribed in the CONTRACT, the CONTRACTOR is free to use any methods or equipment that will accomplish the WORK in conformity with the requirements of the CONTRACT DOCUMENTS.

**27. NORMAL DAYLIGHT HOURS**

CONTRACTOR shall perform WORK on the premises during normal daylight hours and shall not perform WORK on the site when artificial light would be required to safely perform the WORK.

**28. NORMAL WORKING DAYS**

CONTRACTOR shall perform the WORK during normal WORKING DAYS and shall not WORK during Saturdays, Sundays, or recognized national and tribal holidays. Permission of the OWNER shall be required if the CONTRACTOR wants to work 10-hour-4-day work weeks.

**29. LOAD RESTRICTIONS**

The CONTRACTOR shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the WORK. A special permit will not relieve the CONTRACTOR of liability for damage which may result from moving material or equipment.

**30. UNAUTHORIZED VISITS**

Due to the dangerous nature of the abandoned mine land areas, unauthorized visits to the project areas are strictly prohibited. Unauthorized visitors include, but are not limited to, family members/friends of the CONTRACTOR or its workers, officials of the CONTRACTOR not directly associated with the project, and onlookers.

**31. PROJECT PUBLICITY**

The OWNER shall be the sole provider of information about the WORK to area residents, utility companies, and County, State and Federal Agencies, and individuals from the media. Any contacts by the CONTRACTOR with these groups must be approved by the OWNER.

**32. PROSECUTION AND PROGRESS**

- A. Unless otherwise specified, the CONTRACTOR shall submit his progress schedule for the PROJECT MANAGER's approval within ten (10) CALENDAR DAYS after the effective

date of the NOTICE TO PROCEED and prior to mobilization. The CONTRACTOR'S progress schedule, when approved by the PROJECT MANAGER, may be used to establish major construction operations and to check on the progress of the WORK. The CONTRACTOR shall provide sufficient materials, equipment, and labor to guarantee the completion of the PROJECT in accordance with the PLANS and TECHNICAL SPECIFICATIONS within the time set forth in the proposal.

- B. If the CONTRACTOR falls significantly behind the submitted schedule, the CONTRACTOR shall, upon the OWNER's request, submit a revised schedule for completion of the WORK within the CONTRACT TIME and modify its operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the WORK be discontinued for any reason, the CONTRACTOR shall notify the PROJECT MANAGER at least 24 hours in advance of resuming operations.

### **33. QUALITY ASSURANCE**

The CONTRACTOR shall assure that the WORK has been performed in compliance with the TECHNICAL SPECIFICATIONS and DRAWINGS/MAPS as described. The PROJECT MANAGER, in consultation with the PROGRAM MANAGER, shall inspect and accept or reject the WORK as the WORK progresses.

### **34. AUTHORITY OF THE PROJECT MANAGER**

The PROJECT MANAGER, in consultations with the RECLAMATION SPECIALIST III and the ENGINEER, shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, the manner of performance and the rate of progress of the WORK. They shall decide all questions which may arise as to the interpretation of the TECHNICAL SPECIFICATIONS relating to the WORK, the fulfillment of the WORK on the part of the CONTRACTOR, and SUBCONTRACTORS on the PROJECT. The ENGINEER, PROJECT MANAGER and RECLAMATION SPECIALIST III shall determine the amount and quality of WORK performed and materials furnished which are to be paid for under this CONTRACT.

### **35. CHANGES IN THE WORK**

- A. The OWNER may at any time, if the need arises, order changes within the scope of the WORK without invalidating the Agreement. Where applicable, if such changes increase or decrease the amount due under the CONTRACT DOCUMENTS, or in the time required for performance of the WORK, an equitable adjustment shall be authorized by CHANGE ORDER. If such changes require an increase of greater than ten percent (10%)



of the CONTRACT PRICE, pursuant to 2 N.N.C. §223(g), the WORK required in the CHANGE ORDER shall be advertised and BID upon.

- B. The OWNER may at any time, by issuing a written FIELD ORDER, make changes in the details of the WORK unless the CONTRACTOR believes that such FIELD ORDER entitles it to a change in CONTRACT PRICE or TIME, or both, in which event the CONTRACTOR shall give the OWNER notice within seven (7) CALENDAR DAYS after the receipt of the FIELD ORDER. Thereafter, the CONTRACTOR shall document the basis for the change in PRICE or TIME within thirty (30) CALENDAR DAYS. The CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER.

### **36. CHANGES IN PRICE**

The PRICE may be changed only by a CHANGE ORDER. The value of any work covered by a CHANGE ORDER or of any claim for increase or decrease in the PRICE shall be determined by one or more of the following methods in the order of precedence listed below.

- (a) An agreed LUMP SUM.
- (b) The actual cost of labor, direct overhead, materials, supplies, equipment, and other services necessary to complete the WORK. In addition, there shall be added an amount to be agreed upon but not to exceed twenty (20) percent of the actual cost of the WORK to cover the cost of general overhead and profit.

### **37. CORRECTION OF WORK**

All removal and replacement of WORK shall be done at the CONTRACTOR's expense. If the CONTRACTOR does not take action to remove such rejected WORK within ten (10) CALENDAR DAYS after receipt of WRITTEN NOTICE, the OWNER may remove and replace such WORK at the expense of the CONTRACTOR.

### **38. PAYMENTS TO THE CONTRACTOR**

- A. The CONTRACTOR shall submit monthly invoices for PROGRESSIVE PAYMENT to the PROJECT MANAGER on invoices furnished by the OWNER. The PROGRAM MANAGER shall, within ten (10) CALENDAR DAYS after receipt of each PROGRESSIVE PAYMENT invoice, either approve the payment in writing and present the PROGRESSIVE PAYMENT request to the OWNER, or return the PROGRESSIVE PAYMENT invoice to the CONTRACTOR indicating in writing the reasons for refusing



to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the PROGRESSIVE PAYMENT invoice. The OWNER shall, within thirty (30) CALENDAR DAYS of receiving a PROGRESSIVE PAYMENT invoice approved by the PROJECT MANAGER, pay the CONTRACTOR on the basis of the approved PROGRESSIVE PAYMENT invoice.

- B. Under no circumstances or conditions will the CONTRACTOR be paid anything on account of anticipated profits upon all or any part of the WORK covered by the CONTRACT which is not actually performed; nor will the CONTRACTOR be paid more than the LUMP SUM PRICE BID for any item of the BID because the actual quantity is greater or less than the quantity shown in the INVITATION TO BID, the BID SCHEDULE and the TECHNICAL SPECIFICATIONS, unless justified in accordance with Section 39.

### **39. CLAIMS FOR ADJUSTMENT AND DISPUTES**

In unforeseen circumstances during the execution of the CONTRACT, the CONTRACTOR may deem that additional compensation is due for work or materials for any reason such as: the WORK or material was not clearly provided for in the CONTRACT, PLANS, and SPECIFICATIONS; the site conditions at the work site differ materially from those indicated on the ground surface or in the CONTRACT DOCUMENTS (such as latent subsurface condition below a wastepile); the CONTRACTOR disputes the OWNER's estimated quantity of WORK. In such case, the CONTRACTOR shall give advance written notice to the OWNER of its intention to claim such additional compensation before beginning the work on the particular disputed work item. The CONTRACTOR shall have to justify its claim by appropriate surveying measurements performed by a registered surveyor.

The OWNER will review the claim with the supporting documents and, if necessary and justified, will adjust the work quantity through negotiation with the CONTRACTOR. In doing so, the OWNER may reduce and delete some other work to keep the CONTRACT AMOUNT the same or increase the CONTRACT AMOUNT by a CHANGE ORDER. *If the CONTRACTOR fails to give notification as stated above or the OWNER is not afforded proper opportunity by the CONTRACTOR to keep strict account of actual costs as required, then the CONTRACTOR hereby agrees to waive any claim for such additional compensation.* Such notice by the CONTRACTOR and the fact that the OWNER has kept account of the cost of the WORK shall not in any way be construed as proving or substantiating the validity of the claim.

### **40. RETAINAGE AMOUNT**

Ten percent (10%) shall be withheld from all payments until NOTICE OF FINAL ACCEP-

TANCE has been issued by the OWNER to the CONTRACTOR at which time an invoice may be submitted for the balance of the Total Accumulative Retainage Fee owed to the CONTRACTOR.

**41. FINAL ACCEPTANCE**

- A. Upon receipt of WRITTEN NOTICE from the CONTRACTOR that the PROJECT construction WORK has been completed in accordance with the terms and provisions of the CONTRACT DOCUMENTS and is ready for FINAL INSPECTION, the representatives of the OWNER and the CONTRACTOR will make an inspection to verify the completeness of the WORK items.
- B. If the WORK is acceptable then this will be the FINAL INSPECTION and the OWNER will issue the NOTICE OF FINAL ACCEPTANCE of the WORK to the CONTRACTOR.
- C. If, however, the inspection discloses any WORK, in whole or in part, which is not in conformance with the CONTRACT, then the OWNER will issue a written PUNCH LIST to the CONTRACTOR for the items of WORK identified during the inspection to correct the deficiencies in the WORK. The CONTRACTOR shall sign the PUNCH LIST and complete the specified WORK items at its own expense within the time mutually agreed upon by the OWNER and CONTRACTOR.
- D. Upon completion of the WORK, another inspection will be made by the OWNER and the CONTRACTOR, which in this case, shall constitute the FINAL INSPECTION provided all WORK has been satisfactorily completed, in which event the OWNER will so notify the CONTRACTOR in writing of FINAL ACCEPTANCE of the WORK.
- E. Only after the issuance of the NOTICE OF FINAL ACCEPTANCE, the CONTRACTOR will be eligible to invoice the OWNER for the final payment and the RETAINAGE amounts, subject to the CONTRACTOR's fulfillment of Section 42: LIENS of the GENERAL CONDITIONS.
- F. The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the CONTRACTOR, other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this WORK and for every act and neglect of the OWNER and others relating to or arising out of this WORK. However, any payment, final or otherwise, shall not release the CONTRACTOR or its sureties from any obligations under the CONTRACT DOCUMENTS. Final payment made to the CONTRACTOR shall not relieve the CONTRACTOR of responsibility for faulty material

or workmanship.

#### **42. LIENS**

Neither the final payment nor any part of the retained percentage shall become due until the CONTRACTOR delivers to the OWNER either a complete release and unconditional waiver of all liens arising out of this CONTRACT or receipts in full in lieu thereof, and, if required in either case, an affidavit that so far as CONTRACTOR has knowledge or information, the releases and receipts include all the labor and materials for which a lien could be filed. The CONTRACTOR may, if any SUBCONTRACTOR refuses to furnish a release or receipt in full, furnish a bond satisfactory to the OWNER to indemnify him/her against any lien.

#### **43. WARRANTY**

The CONTRACTOR warrants and guarantees for a period of two (2) years from the date of the completed WORK is free from all defects due to faulty materials or workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repair of any damage to other parts of the system resulting from such defects. The OWNER shall give WRITTEN NOTICE to the CONTRACTOR of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to make such repairs, adjustments, or other WORK that may be made necessary by such defects, the OWNER may do so and charge the CONTRACTOR the cost incurred. Final payment made to the CONTRACTOR shall not relieve the CONTRACTOR of responsibility for faulty material or workmanship.

#### **44. DETERMINATION AND EXTENSION OF CONTRACT TIME**

- A. The numbers of CALENDAR DAYS allowed for completion of the WORK shall be negotiated with in the BID PROPOSAL and stated in the CONTRACT and shall be known as the CONTRACT TIME.
- B. The maximum CONTRACT TIME allowed on this CONTRACT is (210) CALENDAR DAYS from the effective date of receipt of the NOTICE TO PROCEED including all Saturdays, Sundays, holidays, and non-work days. All CALENDAR DAYS elapsing between the effective dates of the PROJECT MANAGER's orders to suspend and resume all work, due to causes not the fault of the CONTRACTOR, shall be excluded.
- C. When the CONTRACT TIME has a specified completion date, it shall be the date on which all WORK shall be completed.

- D. If the CONTRACTOR finds it impossible for reasons beyond its control to complete the WORK within the CONTRACT TIME as specified, or as extended in accordance with the provisions of this subsection, it may, make a written request to the OWNER for an extension of time which includes justification for the request. The CONTRACTOR shall give the OWNER as much prior notice as possible. The CONTRACTOR's plea that insufficient time was specified in the CONTRACT is not a valid reason for extension of time. If the PROJECT MANAGER finds that the WORK was delayed because of conditions beyond the control and without the fault of the CONTRACTOR, the OWNER may extend the time for completion in such amount as the conditions justify. The extended time for completion shall then be in full force and effect, the same as though it were the original time for completion.

**45. TIME FOR COMPLETION**

- A. The CONTRACTOR will proceed with the WORK at such rate of progress to insure full completion within the CONTRACT TIME. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the WORK described herein, is a reasonable time. The OWNER'S maximum CONTRACT TIME specified for this project is 210 CALENDAR DAYS. The actual CONTRACT TIME shall be subject to negotiation as part of the BID PROPOSAL.
- B. If the CONTRACTOR fails to complete the WORK within the CONTRACT TIME, or with a written extension of time granted by the OWNER, then the CONTRACTOR will be responsible for any excess cost due to the delay in completion of the WORK, absent an approved CHANGE ORDER issued by the OWNER.
- C. The CONTRACTOR shall not be responsible for delay in the completion of the WORK due to the following: 1) any CHANGE ORDER duly issued by the OWNER, or 2) unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR including, but not limited to, acts of God, of the public enemy, acts of the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather.

**46. SUSPENSION OF WORK, TERMINATION, AND DELAY**

- A. Upon ten (10) CALENDAR DAYS WRITTEN NOTICE, the OWNER may suspend WORK or any portion thereof for a period of not more than ninety (90) CALENDAR DAYS or such further time as agreed upon by the CONTRACTOR, by WRITTEN NOTICE to the CONTRACTOR, which notice shall fix the date on which WORK shall resume. The CONTRACTOR shall resume WORK on the date so fixed. The

CONTRACTOR shall be allowed a reasonable extension of the CONTRACT TIME directly attributable to any suspension imposed by the OWNER.

- B. Where the CONTRACTOR's services have been terminated by the OWNER pursuant to Section 48: DEFAULT AND TERMINATION OF CONTRACT of the GENERAL CONDITIONS, said termination shall not affect any right of the OWNER against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by the OWNER due the CONTRACTOR shall not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.
- C. After ten (10) CALENDAR DAYS from delivery of a WRITTEN NOTICE to the CONTRACTOR the OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the PROJECT and terminate the CONTRACT. In such case, the CONTRACTOR shall be paid for all WORK executed and any expense sustained.
- D. The PROJECT MANAGER shall have the authority to suspend all or part of the WORK due to unsuitable weather, or such other conditions as are considered unfavorable for the prosecution of the WORK.
- E. If it becomes necessary to suspend WORK for an indefinite period, the CONTRACTOR shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The CONTRACTOR shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the WORK. The CONTRACTOR shall erect temporary structures where necessary to provide for traffic on, to, or from the PROJECT site.

#### 47. FAILURE TO COMPLETE ON TIME

For each CALENDAR DAY as specified in the CONTRACT, where any WORK remains uncompleted after the CONTRACT TIME (including all extensions and adjustments as provided in the SECTION 44: DETERMINATION AND EXTENSION OF CONTRACT TIME of the GENERAL CONDITIONS), the sum specified in the CONTRACT as liquidated damages shall be deducted from any money due or to become due the CONTRACTOR. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages that shall be incurred by the OWNER should the CONTRACTOR fail to complete the WORK in the time provided in the CONTRACT. The CONTRACTOR agrees to pay, as Liquidated Damages, the sum of \$800.00 for each WORKING DAY until the FINAL ACCEPTANCE of the WORK.

Permitting the CONTRACTOR to continue and finish the WORK or any part of it after the time

fixed for its completion, or after the date to which the time for completion may have been extended, shall in no way operate as a waiver of the OWNER's rights under the CONTRACT.

#### **48. DEFAULT AND TERMINATION OF CONTRACT**

The CONTRACTOR shall be considered in default of the CONTRACT and such default will be considered as cause for the OWNER to terminate the CONTRACT for any of the following reasons:

- (a) Failure to begin the WORK under the CONTRACT within the time specified in the "NOTICE TO PROCEED"; or
- (b) Failure to perform the WORK or failure to provide sufficient workers, equipment or materials to assure completion of WORK in accordance with the terms of the CONTRACT DOCUMENTS; or
- (c) Performing the WORK unsuitably or neglecting or refusing to remove materials or to perform anew such WORK as may be rejected as unacceptable; or
- (d) Discontinuing the prosecution of the WORK; or
- (e) Failure to resume WORK, which has been discontinued within a reasonable time after notice to resume WORK has been issued; or
- (f) Becoming insolvent or declaring bankruptcy, or committing any act of bankruptcy or insolvency; or
- (g) Allowing any final judgment from any court with competent jurisdiction to stand against it unsatisfied for ten (10) CALENDAR DAYS; or
- (h) Making an assignment for the benefit of creditors; or
- (i) For any other cause whatsoever failing to carry out the WORK in an acceptable manner.

Should the OWNER consider the CONTRACTOR in default of the CONTRACT, the PROGRAM MANAGER shall immediately give WRITTEN NOTICE to the CONTRACTOR and the CONTRACTOR's SURETY as to the reasons for considering the CONTRACTOR in default and the OWNER's intentions to terminate the CONTRACT.

If the CONTRACTOR, within a period of ten (10) CALENDAR DAYS after such notice, does not proceed accordingly, then the OWNER shall, upon WRITTEN NOTICE from the PROJECT MANAGER of the facts of such delay, neglect, or default and the CONTRACTOR's failure to comply with such notice, have full power and authority, without violating the CONTRACT, to take the prosecution of the WORK out of the hands of the CONTRACTOR. The OWNER may appropriate or use any or all materials and equipment that have been mobilized for use in the WORK and are acceptable and may enter into an agreement for the completion of the CONTRACT or use such other methods as in the opinion of the PROJECT MANAGER are required for the completion of the CONTRACT in an acceptable manner.

All costs and charges incurred by the OWNER, together with the cost of completing the WORK under CONTRACT, shall be deducted from any moneys due or which may become due the CONTRACTOR. If such expenses exceed the sum which would have been payable under the CONTRACT, then the CONTRACTOR and the SURETY shall be liable and shall pay to the OWNER the amount of such excess.

#### **49. ATTORNEY'S FEES**

If it shall be necessary for the OWNER to bring suit to enforce any of the provisions of this CONTRACT, the OWNER shall be entitled to reasonable attorney fees in addition to any judgement including court costs.

#### **50. ASSIGNMENT**

- A. The CONTRACTOR shall not assign the CONTRACT or sublet it as a whole without the written consent of the OWNER, nor shall the CONTRACTOR assign any moneys due or to become due to CONTRACTOR hereunder, without the previous written consent of the OWNER.
- B. If the CONTRACTOR desires to assign the CONTRACT, the assignment must be concurred by the CONTRACTOR's SURETY and must receive the written approval of the OWNER prior to its execution. Upon approval, the CONTRACTOR shall file copies of all appropriate documents with the OWNER.

#### **51. OVERTIME COMPENSATION**

The CONTRACTOR or SUBCONTRACTOR shall not require or permit anyone employed under this CONTRACT to WORK in excess of forty hours per week unless the employee receives compensation at a rate not less than one and one-half (1½) times the basic rate of pay for all hours worked in excess of forty hours per work week.



**52. ACCESS TO AND OF RECORDS**

- A. The CONTRACTOR agrees to provide the OWNER access to any books, documents, papers, and records which are directly pertinent to this CONTRACT for the purpose of making audit, examination, excerpts, and transcriptions. Such access, as needed, will be made during the normal business hours, or by appointment.
- B. The CONTRACTOR agrees to retain and preserve any books, documents, papers, and records which are directly pertinent to this CONTRACT for a period of 3 years from the date of FINAL PAYMENT for the work or from the date of FINAL ACCEPTANCE, whichever is later.

**53. DRUG AND ALCOHOL POLICY**

- A. The CONTRACTOR agrees to advise its employees and the employees of its SUBCONTRACTORS and agents that it is the policy of the OWNER that (1) the manufacture, dispensation, or sale, offer for sale, purchase, use, transfer, or possession of illegal drugs or alcohol on the AML job site is prohibited; (2) employees, while on the OWNER's premises, are prohibited from being under the influence of alcohol ("Under the Influence" means that the employee is affected by alcohol in any detectable manner); (3) entry onto the Navajo Nation constitutes consent to an inspection of the employee and his or her vehicle as personal effects while entering or leaving premises; (4) any employee who is found in violation of the Policy or who refuses to permit an inspection may be removed or barred from the Navajo Nation at the discretion of the OWNER.
- B. Regarding employees that work on the OWNER's premises, the Contractor agrees to implement a Drug and Alcohol Policy no less stringent than the Navajo Nation's policy.

**54. ARTICLES OF HISTORICAL OR ARCHAEOLOGICAL VALUE**

Should any previously unrecorded and/or previously undetected cultural resources, ancient ruins, archaeological resources, fossils, and historical remnants, be discovered during the construction operations, all WORK must cease in the immediate area of the exposed resources. The ENGINEER, RECLAMATION SPECIALIST III or PROJECT MANAGER, OWNER, the Navajo Historic Preservation Office, and the State Historic Preservation Office shall be notified to arrange an on-site inspection to determine the significance and disposition of the archeological remains. If the CONTRACTOR disturbs or causes damage to any historical or cultural resources, the CONTRACTOR shall mitigate such disturbance or damage at its own cost.



## **55. CLEAN AIR AND WATER ACTS**

The CONTRACTOR shall comply with all requirements and applicable regulations, standards, and implementation plans under the Clean Air Act (42 USC 7401 et. seq.) and the Clean Water Act (33 USC 1251 et. seq.) and applicable Navajo Nation environmental regulations. No part of the WORK shall be performed in a facility listed on the U.S. Environmental Protection Agency List of Violating Facilities during the term of the CONTRACT.

Clean air and water standards include any enforceable rules, regulations, guidelines, orders or other requirements issued under the Clean Air Act, the Clean Water Act, or Executive Order 11738, applicable approved implementation plans described in §110(d), §111(c) and (d), or §112(d) of the Clean Air Act, and requirements contained in permits issued by the U.S. Environmental Protection Agency or state or local governments authorized by §402 or §307 of the Clean Water Act. "Facility", as used here means any building, plant, structure, mine, location, or site of operations owned, leased, or supervised by the CONTRACTOR or SUBCONTRACTOR in the performance of the CONTRACT.

## **56. JURISDICTION OF THE NAVAJO NATION**

The CONTRACTOR agrees, except as may be prohibited by applicable Federal law, that the laws of the Navajo Nation shall govern the interpretation, construction, performance and enforcement of the CONTRACT DOCUMENTS. The CONTRACTOR consents to the jurisdiction of the Navajo Nation. The CONTRACTOR agrees that any action or proceeding brought by the CONTRACTOR against the Navajo Nation shall be brought only in the Courts of the Navajo Nation, and no action or proceeding shall be brought by the CONTRACTOR against the Navajo Nation in any court of any state.

## **57. MISCELLANEOUS**

- A. The CONTRACTOR shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the WORK, except where such excavation or removal is provided for in the CONTRACT DOCUMENTS.
- B. Before the FINAL ACCEPTANCE shall be made, the CONTRACTOR shall remove from the site, all machinery, equipment, surplus and discarded materials, rubbish, oil and grease, temporary structures, and the like. The CONTRACTOR shall leave the site in a neat and presentable condition. Materials cleared from the site shall be legally disposed of. All temporary roads and disturbed areas shall be restored to original or better natural condition. There is no payment for clean-up.

- C. The CONTRACTOR shall post appropriate warning signs at the work site. The signs should be large enough for viewing from a reasonable distance.

**END OF GENERAL CONDITIONS**



# **TECHNICAL SPECIFICATIONS**

**Navajo Abandoned Mine Lands Reclamation Department**

**CAMERON AML RECLAMATION PROJECT 3**

**TECHNICAL SPECIFICATIONS**

<b>Section 1</b>	<b>General Information</b>
<b>Section 2</b>	<b>Mobilization, Demobilization and Access Road Improvement</b>
<b>Section 3</b>	<b>Wastepile Reclamation, Openpit Backfilling, Highwall Grading, Site Grading and Drainage Earthwork</b>
<b>Section 4</b>	<b>Rebuilding of Spillway Near NA-0174</b>
<b>Section 5</b>	<b>Site Specific Details</b>
<b>Section 6</b>	<b>Radiological Cleanup Guideline and Work Safety</b>
<b>Section 7</b>	<b>Cultural, Fish &amp; Wildlife and Paleontological Resources Protection</b>

**MAPS AND DRAWINGS**



## SECTION 1: GENERAL INFORMATION

### 1.1 GENERAL WORK DESCRIPTION

The WORK described is related to RECLAMATION of eleven (11) abandoned uranium mine sites, encompassing in total approximately 302 acres of land near Cameron, Arizona, on the Navajo Nation. The PROJECT sites are located 7.25 miles to 12.0 miles southeast of Cameron at the following locations:

<u>Site</u>	<u>Section, Township &amp; Range</u>	<u>USGS 7.5' QUAD</u>
NA-0155a	N½ Sec. 29, T28N, R10E	Cameron SE
NA-0155b	NE¼ Sec. 29, T28N, R10E	Cameron SE
NA-0163	NE¼, SE¼ Sec. 34, T28N, R10E	Cameron SE
NA-0166	SE¼, SE¼ Sec. 33, T28N, R10E	Cameron SE
NA-0172a	NW¼ Sec. 11, T27N, R10E	Wupatki NE
NA-0172b	NW¼ Sec. 11, T27N, R10E	Wupatki NE
NA-0173	N½ Sec. 11, T27N, R10E	Wupatki NE
NA-0174	NW¼ Sec. 11, T27N, R10E	Wupatki NE
NA-0175	NE¼, SE¼, SW¼ Sec. 11, T27N, R10E	Wupatki NE
NA-0179	NE¼ Sec. 15, T27N, R10E	Wupatki NE
NA-0180	NW¼ Sect. 14, T27N, R10E	Wupatki NE

#### The PROJECT sites are to be reclaimed in the following order:

- 1) NA-0166 Charles Huskon No. 11
- 2) NA-0155a Charles Huskon No. 10
- 3) NA-0155b Charles Huskon No. 10
- 4) NA-0163 Ryan No. 1
- 5) NA-0179 Yazzie No. 1
- 6) NA-0180 Yazzie No. 2
- 7) NA-0174<sup>1</sup> Ramco No. 20
- 8) NA-0172a Ramco No. 21
- 9) NA-0172b Ramco No. 21
- 10) NA-0173 Ramco No. 22
- 11) NA-0175<sup>2</sup> Ryan No. 2

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<sup>1</sup> Includes repair of a spillway on a nearby catchment dike for livestock water.

<sup>2</sup> Due to the size of site, this site will be reclaimed in areas from west to east. See Section 5 Site Specific Details for site specific sequence.

**The following are the payable items of WORK:**

1. Earthwork:
  - A) Classified excavation of approximately 1,234,850 bank cu. yd. of radioactive mine waste and backfilling of the abandoned openpits at the above-mentioned sites with the excavated material in accordance with the specified backfilling sequence. This WORK shall be done in such a manner that the reclaimed surfaces conform with the specified contours, erosion potential is minimized, outside drainages are diverted, and positive drainage off the reclaimed areas is ensured;
  - B) Approximately 12,800 bank cu. yd. of earthwork for highwall grading at sites NA-0155a, NA-0175 and NA-0179; and
  - C) Approximately 2,844 bank cu. yd. of earthwork for the construction of approximately 3,630 linear feet of drainage diversion ditches and berms as shown in Maps No. 15, 17, 18, 19, 20 and 22.
2. Repair of an eroded spillway on a water catchment dike near site NA-0174 with 2,200 cu. yd. of compacted engineered fill, 100 cu. yd. of gabion and gabion mattress-enclosed riprap, 2.0 cu. yd. of concrete, and 110 sq. ft. of filter fabric.

**NOTES:**

- \* The following WORK shall be considered incidental to this PROJECT: mobilization, ACCESS ROAD improvement and/or demolishing, demobilization, clean-up, site grading to establish specific grades and contours for the reclaimed surfaces, drainage grading to establish specific drainage patterns, covering of "HOT SPOTS" to meet the OWNER's radiological cleanup guidelines, cost and performance of compaction and moisture testing, decontamination of construction EQUIPMENT by flushing with water before demobilization and other WORK or responsibilities besides the BID ITEMS on the BID SCHEDULE, such as dust suppression, provision of personnel protection, training and other measures for workmen safety, which are required to get the major RECLAMATION WORK completed to the satisfaction of the OWNER. **There is no payment for the incidental WORK.** The CONTRACTOR shall include the cost for these incidental WORK items with other items of WORK on the BID SCHEDULE.
- \* Payment will be based on estimated percentage of WORK completed on a site by site basis and the WORK quantities from the BID SCHEDULE will be apportioned on a site specific basis.
- \* Payment for the two BID ITEMS will be done on LUMP SUM basis. No WORK measurement will be done for payment purpose.

- \* The CONTRACTOR shall provide an enclosed walk through access control trailer with minimum dimensions of 20 ft. L x 10 ft. W and a 5,000 watt generator for usage by the OWNER's HEALTH PHYSICIST'S staff.
- \* The CONTRACTOR shall meet the OWNER's post RECLAMATION radiological guidelines.
- \* The CONTRACTOR shall follow the backfill sequence (please refer to Section 3) in order to meet the OWNER's post RECLAMATION radiological guideline.
- \* For all sites: provide adequate drainage and erosion protection for the reclaimed site; grade, terrace, recontour and roughing the reclaimed surface, including access roads disturbed by construction work; ensure compliance with the OWNER's guidelines for radiation emission from the reclaimed sites; and cleaning up the sites after RECLAMATION WORK and demobilization.
- \* Volume calculations shown in these TECHNICAL SPECIFICATIONS and BID SCHEDULE are estimates only and it is expressly declared that the OWNER does not guarantee the accuracy of the information or that the level of WORK encountered is the same in character, location and elevation as shown on the MAPS and DRAWINGS. It shall be the responsibility of the BIDDER to make such investigations and calculations as BIDDER deems necessary to verify the WORK quantities before bidding.
- \* The WORK to be accomplished under this CONTRACT will require close coordination between the CONTRACTOR, the OWNER'S PROGRAM MANAGER, PROJECT MANAGER, RECLAMATION SPECIALIST III, HEALTH PHYSICIST, and ENGINEER.
- \* Applicable occupational safety, radiation safety and radiological clean-up guidelines for the reclaimed areas shall be strictly followed (please refer to Section 6).

## 1.2 LOCATION OF SITES AND SITE ACCESS

Locations of sites are shown on the Map No. 1: Location Map. Access to the sites are via dirt roads which originate from rural roads or highways shown on the location map. Some improvements to the access roads may be necessary before mobilization of the construction EQUIPMENT to the sites. Distances between sites may be approximated from the location map.

## 1.3 SITE SPECIFIC DETAILS

Details of WORK items will be found in Section 5 of this TECHNICAL SPECIFICATIONS.

#### 1.4 SUBMITTAL

- A. Submittal requested in the TECHNICAL SPECIFICATIONS shall be delivered to the PROGRAM MANAGER at the Navajo Abandoned Mine Lands Reclamation Department, Shiprock AML Program, 1 Uranium Blvd., P.O. Box 3605, Shiprock, NM 87420.
- B. The CONTRACTOR shall submit, within ten (10) CALENDAR DAYS after execution of the CONTRACT, a schedule of WORK for the performance of the WORK, including routine workdays and hours, holidays observed by the Navajo Nation, and days that the PROJECT will remain idle. The schedule shall also indicate WORK schedules for SUBCONTRACTORS and their estimated start and completion days. Allowance in the schedule shall be made for routine delays due to weather or other site conditions as they occur. The PROJECT MANAGER, will approve or modify the said schedule and the WORK sequence. The CONTRACTOR'S pace of WORK shall not cause any undue pressure on the OWNER's PROJECT monitoring activities and on the paleontological monitoring activities. The CONTRACTOR shall allow sufficient time for verification of the radiological clean-up prior to starting the next sequence of WORK and/or PROJECT. Any significant deviation from the schedule shall be submitted in writing to the PROJECT MANAGER as the WORK progresses. The OWNER's estimated maximum CONTRACT TIME for this PROJECT is 210 CALENDAR DAYS.
- C. The SUPERINTENDENT shall submit to the PROJECT MANAGER daily logs (to be furnished by the OWNER) indicating the following: 1) weather conditions, 2) EQUIPMENT used, 3) WORK completed, including cubic yards moved, 4) delays, 5) EQUIPMENT downtime, 6) volume of water use for dust suppression, 7) injuries, 8) visitors, and 9) concerns and recommendations. Both the SUPERINTENDENT and the PROJECT MANAGER will acknowledge the actual daily accomplishments by signing off on each daily log. The report shall be submitted to the OWNER on a weekly basis.

#### 1.5 CONDITIONS AND RESTRICTIONS

- A. WORK shall be performed in accordance with the TECHNICAL SPECIFICATIONS, as well as the stipulations of the Navajo Fish and Wildlife and Historic Preservation Departments in Section 7. The PROJECT MANAGER shall be consulted for clarifications on the stipulations provided by these departments. The CONTRACTOR shall also abide by all other applicable laws of the Navajo Nation.
- B. WORK shall be conducted with minimum interference to public/private roads, local residents and their dwellings and livestock. The CONTRACTOR's personnel must care for local traffic and maintain appropriate speed limits on local roads and be responsible for any accidents. Egress and access shall be maintained at all times.
- C. Existing utilities, bench marks, trees, vegetation and landscaping MATERIALS near and



outside the PROJECT boundaries shall be protected.

- D. Where required, the CONTRACTOR shall provide and maintain EQUIPMENT tire-high safety berms on sloping haul roads to prevent EQUIPMENT rolling off the roads. If the WORK involves working around unprotected hazardous mine features, such as, shafts, open adits, pits, unstable structures, water bodies, dangerous highwalls and the like, the CONTRACTOR shall be responsible for the safety of its workers and others during construction and during non-working hours. Fencing of these hazards may be required as a safety precaution.
- E. The CONTRACTOR shall provide such detours, barricades, warning signs, flares, flashing light signals and flagmen, as appropriate, to ensure the safety of the general public, as well as employees and authorized visitors, when construction WORK is in progress or when public roads are being used for material handling.
- F. The reclaimed sites will be inspected with the CONTRACTOR two (2) years after PROJECT completion. Any damages or imperfections noticed in the WORK, which can be attributed to faulty workmanship or MATERIAL defects shall be promptly corrected by the CONTRACTOR, at their own costs.
- G. Paleontological salvage work, field monitoring and designation of exclusion areas will be conducted by the Museum of Northern Arizona at eight (8) sites. This WORK will be planned in such a manner that will cause no interruption to the CONTRACTOR's WORK. This information will be made available to the successful Bidder. The CONTRACTOR shall cooperate with the paleontologists and coordinate the construction WORK with their salvaging and monitoring WORK and honor the exclusion areas.

## **1.6 QUALITY ASSURANCE**

The CONTRACTOR shall assure that the WORK has been performed in compliance with the SPECIFICATIONS and guidelines as described herein. The PROJECT MANAGER, in consultation with the PROGRAM MANAGER, shall inspect and accept, or reject the WORK as the WORK progresses.

## **1.7 DELIVERY, STORAGE AND HANDLING**

- A. The CONTRACTOR shall be responsible for the delivery, storage and handling of all items and MATERIALS used in performing the WORK.
- B. The CONTRACTOR shall be responsible for all MATERIALS used in conjunction with the WORK until said WORK is accepted and approved by the PROJECT MANAGER, in consultation with the PROGRAM MANAGER and shall warrant all MATERIALS as

required by TECHNICAL SPECIFICATIONS, Section 1.6 Quality Assurance.

**1.8 EXECUTION**

- A. Prior to commencement of the WORK, the CONTRACTOR will be in compliance with all applicable Navajo Nation laws.
- B. The CONTRACTOR will obtain and provide to the OWNER proof of licenses, permits, bonds, insurance, and all other such items as may be required by the CONTRACT documents prior to the execution of the WORK.

## **SECTION 2: MOBILIZATION, DEMOBILIZATION AND ACCESS ROAD IMPROVEMENT**

### **2.1 MOBILIZATION/DEMOBILIZATION**

#### **A. Description:**

This section covers the CONTRACTOR'S operations for:

1. Movement of personnel, EQUIPMENT, operation supplies, and incidentals to the various PROJECT sites;
2. Establishment of temporary offices, access control trailer, and other necessary facilities at a location which: has received cultural resources clearance; has radioactivity level at or below the background level; and is approved by the PROJECT MANAGER in consultation with the OWNER's HEALTH PHYSICIST;
3. Preparatory WORK at the construction sites without disturbing off-limit areas.
4. Demobilization of the CONTRACTOR'S EQUIPMENT and all other facilities, final PROJECT clean-up, and for all other WORK for which payment is not otherwise provided for under the CONTRACT.

The temporary facilities may include, but not be limited to the following:

1. Workshops, temporary office, enclosed access control trailer, storage yards for EQUIPMENT including spare parts, fuels and oil;
2. Sanitation, first-aid, and communication facilities (mobile telephone);
3. The CONTRACTOR's temporary electrical power system;
4. Other items such as drinking water, compressed air, etc., not specifically listed but required for the functioning of construction activities.
5. The CONTRACTOR may establish and maintain, for its own convenience, other trailers, parking areas, and other maintenance facilities at designated areas for use during construction.

#### **B. Execution:**

1. **Mobilization:** Upon receipt of the NOTICE TO PROCEED, the CONTRACTOR shall, within 10 CALENDAR DAYS, furnish, mobilize, move in, and install/perform such

temporary works, EQUIPMENT and construction yard as are necessary for the successful completion of the WORK. The CONTRACTOR shall provide the PROJECT MANAGER with a schedule for the proposed WORK in calendar form. The CONTRACTOR shall also operate and maintain such temporary works, EQUIPMENT and construction facilities throughout the period of construction. All applicable temporary works, such as sanitation facilities shall fully comply with any applicable rules and regulations. Clearing and grubbing operations necessary for the temporary work, if any, shall also be included as mobilization. The cost for these facilities will be borne by the CONTRACTOR.

2. **Demobilization:** Upon completion of the WORK under this Contract, the CONTRACTOR shall remove all temporary works, EQUIPMENT and construction yard. The CONTRACTOR shall remove from the WORK site all rubbish, unused MATERIALS, and shall fill and dress all holes and cavities made for convenience, and leave all areas in good order and condition, subject to the approval of the PROJECT MANAGER. Demobilization of the EQUIPMENT before the FINAL INSPECTION and acceptance of the PROJECT by the OWNER may be allowed with the express written permission of the OWNER. However, no payment will be allowed for re-mobilization to finish up any remaining WORK after the pre-FINAL INSPECTION.

**C. Conditions and Restrictions:**

1. Temporary access improvement WORK shall be performed in a manner that will minimize disturbance to existing vegetation and minimize potential erosion. The CONTRACTOR shall use only existing access roads, as will be shown by the PROJECT MANAGER, which have received clearances from the Navajo Historic Preservation Department and the Navajo Fish and Wildlife Department.
2. The CONTRACTOR shall minimize disturbance resulting from site access improvements. Existing permanent roads shall be left in condition at least as good as prior to the WORK.
3. The CONTRACTOR shall post PROJECT signs and warning signs at PROJECT site(s) of appropriate design, in consultation with the OWNER, indicating dangerous WORK areas and prohibiting trespass. The signs shall be large enough for viewing from a reasonable distance.
4. Radiation surveys will be done on all equipment prior to mobilization and demobilization. See Section 6 for details.

**2.2 ACCESS ROAD IMPROVEMENT**

**A. General:**

This WORK item is to develop and maintain site access or improve existing site access roads.

Improvement is limited to the extent required to complete the WORK at each mine site. It is not the intent of this WORK to construct roads. The WORK shall include temporary site access to reach sites of construction, and maintenance of existing, permanent roads that must be used for movement of EQUIPMENT, MATERIALS and labor. The CONTRACTOR shall minimize disturbance resulting from site access improvements. In areas in which a passable road did not previously exist, the CONTRACTOR shall reclaim the access improvement in accordance with this section upon completion of the WORK. Existing, permanent roads shall be left in condition at least as good as prior to the WORK. Any restrictions imposed by the Navajo Nation's Historic Preservation Department relating to access improvement shall be adhered to. To avoid any impact to any cultural resources present in the vicinity of the access roads, the width of the access roads shall not be increased beyond their existing width.

**B. MATERIALS:**

1. The CONTRACTOR may utilize local resistant MATERIALS or import road base MATERIALS, if needed, to maintain access and minimize damage to the environment. If wet weather conditions prevail, OWNER may require the CONTRACTOR to stockpile road base material at WORK sites in order to maintain the schedule.
2. The CONTRACTOR may choose to temporarily place corrugated steel pipes or other conveyance structures in the access improvement with the permission of the OWNER, so long as these structures do not interfere with drainage.

**C. Execution:**

1. The CONTRACTOR shall discuss with the PROJECT MANAGER his plan for access improvements to be performed at each site and not deviate from this plan without the approval of the OWNER. Access improvement shall not interfere with or impede the drainage of the land. Where temporary site access crosses perennial or intermittent streams, the CONTRACTOR shall maintain the drainage by providing a temporary crossing. Upon completion of the WORK, the CONTRACTOR shall restore drainage to approximate original condition, subject to OWNER's acceptance and approval.
2. Temporary access improvements shall be constructed in a manner that will minimize disturbance to existing vegetation and minimize potential erosion.
3. When no longer required by the CONTRACTOR, temporary access improvements will be reclaimed in the following manner: existing passable access shall be left in or returned to approximate original condition; access roads previously impassable or otherwise designated for elimination, shall be reclaimed to blend with surrounding contours, provided with erosion protection, their surfaces scarified, revegetated and finally blocked off with boulders and/or berms.

## **SECTION 3: WASTEPILE RECLAMATION, OPENPIT BACKFILLING, HIGHWALL GRADING, SITE GRADING AND DRAINAGE EARTHWORK**

### **3.1 DESCRIPTION**

This section describes various earthwork items and drainage construction required for the RECLAMATION of the 11 abandoned uranium openpits. The WORK includes site preparation, labor, MATERIALS, use of EQUIPMENT and all incidentals necessary to complete the RECLAMATION WORK. There are only three (3) PAY ITEMS in this section relating to earthwork for wastepile reclamation, highwall grading, and drainage. Site grading, drainage grading, dust suppression and debris burial are considered incidental WORK. The CONTRACTOR will be paid for the bank cu. yds. of wastepile material excavated out, hauled, placed in the openpits and graded. Payment will be based on one-time in-situ (bank) volumes of the wastepiles with no regards for rehandling during placement or site grading to meet the post-reclamation grade requirements.

### **3.2 SAFETY PRECAUTIONS AND OTHER CONDITIONS/RESTRICTIONS:**

1. The CONTRACTOR shall exercise precautions appropriate to working in areas with potential physical hazards, such as dangerous, highwalls, dangerous openpits, dangerous and polluted water impoundments etc. Personnel shall be informed of any necessary special safety procedures for EQUIPMENT usage and general WORK in these areas.
2. Backfilling by heavy EQUIPMENT pushing or dumping over highwalls exceeding 10 vertical feet will not be allowed.
3. Smoking or any open flame, including burning of any debris, within any AML PROJECT area is prohibited.
4. The CONTRACTOR shall conduct earthwork in a fashion that will eliminate or minimize erosion during and after construction. This shall include limiting disturbance of existing vegetation, working EQUIPMENT parallel to contours, use of temporary drainage control where appropriate, and other practices as directed by the PROJECT MANAGER.
5. The CONTRACTOR shall provide an adequate water supply system for dust control to reduce dust nuisance, and to reduce the level of airborne radionuclides to or below the OWNER's guideline, during all earthwork activities. The CONTRACTOR shall obtain a water use permit from the Navajo Nation Water Resource Management. The CONTRACTOR shall provide a copy of the approved permit to the OWNER.

### **3.3 CLASSIFICATION OF BACKFILL MATERIAL**

Backfill material shall normally consist of mine waste, subsoil, or a blend thereof. Backfill material shall be free from combustible MATERIALS. This shall include but not be limited to wood, wood products, trash and vegetation. Backfill material in this PROJECT has been classified into three (3) classes as follows based on the level of radioactivity these MATERIALS contain:

- Class A: Mine waste, overburden, subsoil, topsoil or other suitable backfill material with Ra-226 concentration equal to or less than the average Ra-226 concentration of the background area in the immediate vicinity of the PROJECT as computed from contact radiological measurement. The material must be free from wood, wood products, solid waste, hazardous waste, toxic waste, oil/grease, trash, vegetation, combustible MATERIALS and MATERIALS that retard vegetative growth.
- Class B: MATERIAL similar to Class A, but predominantly mine waste, overburden or protore (low grade ore) MATERIAL with Ra-226 concentration exceeding the average Ra-226 concentration of the background area in the immediate vicinity of the PROJECT but not exceeding 25  $\mu\text{Ci/g}$ .
- Class C: All other mine waste, overburden, protore or subsoil material whose Ra-226 concentration exceeds 25  $\mu\text{Ci/g}$ .

### 3.4 EXECUTION

#### A. Submittal:

The CONTRACTOR shall submit with the BID PROPOSAL an updated list of EQUIPMENT to be used specifically to complete this section of the WORK. The EQUIPMENT shall be inspected and approved by the PROJECT MANAGER prior to initiation of the WORK. Before beginning construction, the CONTRACTOR shall submit proposed construction schedule and a résumé of the PROJECT SUPERINTENDENT to the PROJECT MANAGER for the OWNER's approval. During construction, the CONTRACTOR shall submit to the PROJECT MANAGER daily reports, material SPECIFICATIONS, engineering test results etc. in prescribed forms and such other documents as may be required by the PROJECT MANAGER under the CONTRACT.

#### B. Openpit Backfilling:

**Excavation, Hauling and Dumping of Backfill Material:** The CONTRACTOR shall excavate mine waste from wastepiles outside the perimeter of the openpits and use it for backfilling the openpits. If the ground below the wastepiles is radioactive, it may have to be overexcavated to meet the OWNER's radiological clean-up guideline. Random fill may be placed where required. The distribution of MATERIALS throughout a fill shall be such that there shall be no lenses, pockets, streaks or layers of material differing substantially in texture and gradation from the surrounding material in the fill. Backfill shall be compacted in layers not exceeding 3 feet in



thickness by at least 5 passes of the earthmoving EQUIPMENT exerting a minimum pressure of one hundred (100) pounds per square inch. The final graded surface shall conform with the specified contours and meet the OWNER's radiological clean-up guideline. Water shall be used as necessary during earthmoving for dust control. The backfill sequence must meet the following SPECIFICATIONS.

#### **Typical Excavation and Backfilling Sequence**

1. Class A and/or Class B material shall be excavated out from the designated wastepiles, hauled to the openpits and placed in the bottom of the pit(s) as a buffer zone. The thickness of the layer will be 3 feet or more depending on the availability of this type of material.
2. Class C material shall be excavated out from the wastepiles and placed in the openpit(s) on the top of the Class A and/or Class B MATERIALS.
3. Class B material, if available, shall be excavated out from the wastepiles and placed in the openpit(s) on the top of the Class C MATERIALS.
4. Finally, Class A MATERIALS from the wastepiles, overburden pile and/or other designated borrow source, if indicated on the maps, shall be used to construct the final cover of the reclaimed openpit(s).
5. The OWNER reserves the right to make adjustments or revisions in lines or grades, if found necessary, as the construction WORK progresses to obtain satisfactory reclamation.

#### **C. Highwall Grading:**

Grading of highwalls to reduce their slopes shall be performed only at sites NA-0155a, NA-0175 and NA-0179 (a total of 12,800 bank cu. yd. of earthwork) where complete elimination of the highwalls are not feasible due to shortage of backfill material. The final slope of the highwalls shall not normally exceed 3 H : 1 V, except with the approval of the PROGRAM MANAGER. The reclaimed highwalls shall blend with the existing topography. The highwalls can easily be dozed. Dozer pushing should not leave rill running up and down slopes and the slopes need to be left rough.

#### **D. Site Grading and Drainage grading:**

The intent of this WORK is to develop the proper reclaimed contours to establish favorable drainage conditions and erosion protection at all sites. Random cut and fill may be used for this purpose. The graded slopes of the reclaimed surfaces shall be as close as practicable to those shown on the cross sections, but the steepest slopes shall not exceed 3 H : 1 V. Site grading shall be performed to provide a RECLAMATION area which blends well with natural conditions in adjacent areas.



Please refer to the individual Post Reclamation Maps for final slope SPECIFICATIONS, and refer to DRAWING NO. 1 for drainage structure SPECIFICATIONS.

The CONTRACTOR shall grade the existing topography to allow surface water to drain freely away from the reclaimed areas. Efforts shall be made to minimize the extent of this grading and limit the disturbance of existing vegetation.

Graded surfaces shall be left rough or roughened with 6-inch deep indentations or furrows to prevent erosion and catch small amounts of runoff to aid vegetation. This will include access roads improved by the CONTRACTOR for the sole purpose of construction WORK. The PROJECT MANAGER and CONTRACTOR shall discuss incorporating terraces into final lifts of backfilling before the start of backfilling. On reclaimed slopes, with slopes of 5 H : 1 V or steeper and greater than 50 ft. in length, 1 ft. high terraces will be required at an interval not exceeding 50 ft. measured in the direction of maximum slope. Also, in general, earthen berms, terraces, and other structures shall be constructed, as directed by the PROJECT MANAGER, to prevent future erosion by wind and water and improve drainage. Abrupt changes in grade shall be rounded to provide a pleasant visual effect. Depressed areas shall be graded to prevent ponding or standing water.

Site grading is incidental WORK. To minimize this work, the CONTRACTOR shall place the final layers of the backfill in close conformance with the post-reclamation contours.

#### **E. Construction Debris Burial:**

Construction debris may be incorporated in the fill provided that such MATERIALS are properly broken down and placed in such a manner that no open voids exist. The placement of debris in the fill shall be subject to the prior written approval of the PROJECT MANAGER. Burning of debris is not allowed. This is incidental WORK.

#### **F. Drainage:**

Reclamation shall ensure diversion of runoff from outside the reclaimed areas, as well as proper drainage from the reclaimed areas without ponding and leaching/erosion of buried mine waste.

If the CONTRACTOR constructs temporary drainage ditches in the form of swales or ditches upgradient of WORK areas to minimize erosion during construction, such drainage will be constructed with minimum disturbance to the existing vegetation, and upon completion of WORK shall be graded to blend with surrounding contours and then revegetated.

On inclined surfaces, if necessary, temporary ACCESS ROADS shall be cut or crowned to slope in toward the hillside at a grade of not less than 2 percent. At the intersection of the inside edge of the ACCESS ROAD with the slope, a shallow ditch shall be formed. Water bars shall be installed across the ACCESS ROAD and roadside ditch. If the WORK is scheduled during wet weather, a catch basin and culvert shall be constructed at the base of the ACCESS ROAD as

directed by the PROJECT MANAGER.

Drainage ditches, channels and berms shall be used for drainage diversion, where shown on the Post Reclamation Maps, or at other places depending upon the topography of the reclaimed surface. Dimensions of these structures are shown on DRAWING NO. 1.

**G. Dust Suppression:**

Dust suppression shall be provided at all times during the construction hours to prevent dust originating at the loading and unloading points of wastepile or cover material or on the haul road, and to minimize airborne radionuclides. The dust levels at the PROJECT will be monitored by the OWNER'S representatives to assure that the levels do not exceed EPA air quality levels. Haul roads shall be damp at all times to reduce the dust levels of traveling EQUIPMENT and vehicles. A minimum 5,000 gallon capacity, double spraying water wagon, with a rotating fire hose mounted to the driver's cab, is strongly recommended for spraying water on the haul roads and all dust generation points.

**H. Safety:**

All applicable health and safety rules, regulations and guidelines, i.e. OSHA, MSHA, the OWNER's radiological clean-up guideline, etc. shall be followed. Please refer to Section 6.

## **SECTION 4: REBUILDING OF SPILLWAY NEAR NA-0174**

### **4.1 DESCRIPTION AND LOCATION**

This section describes the WORK to rebuild an eroded natural spillway which is part of an existing dike built for the purpose of capturing and storing surface runoff. This is a PAY ITEM. Presently, the earthen water catchment structure cannot sufficiently store water since the eroded spillway is acting as an outlet channel.

The approximate dimensions of the dike are as follows: Length - 1,280 feet; top width - 10 feet; height - 8 to 12 feet; and bottom width - 30 to 38 feet. The natural surface at the north end of the dike was designed as a spillway. The spillway discharge area elevation was originally about 4,216 feet. The present elevation of the top of the dike is about 4,220 feet.

The dike is located approximately west to southwest of NA-0174. The site is accessed by traveling on Indian Route 6730 for about 10.5 miles from the junction of 6730 and highway 89 and continuing on an unimproved dirt road for approximately 0.25 miles.

The WORK consists of: repairing and rebuilding of the north end of the dike; construction of a 4½ feet wide gabion spillway structure and a stilling basin (approximately 30 feet x 16 feet in area) in the rebuilt portion of the dike; and providing an 8-inch thick mat-enclosed (Reno mattress type) riprap on the dike faces in contact with the spillway for protection against erosion.

### **4.2 MATERIALS SPECIFICATIONS**

#### **A. Fill:**

Zone 1 (clayey) and Zone 2 (sandy) types of engineering fill MATERIALS are available on-site and within the boundaries of the adjacent PROJECT sites within 750 feet haul distance and shall be used for dike extension and spillway construction as shown on the Drawing No. 3. The fill material shall not contain any rock larger than 8-inches in maximum dimension. The fill shall be moisture conditioned at the borrow source. Fill material shall not contain any unsuitable material, such as roots, debris, or other deleterious material. No earthwork shall be placed when the fill material or the foundation or embankment on which it is to be placed is frozen, muddy or otherwise covered with snow. The PROJECT MANAGER shall approve the borrow source(s) for the fill material.

Clearing and grubbing shall include removal of all vegetation, debris and other deleterious material from all areas to receive fill.

After the required excavations for the erosion channel and the foundation for the dike extension have been completed, but prior to placement of any fill, the soil at the bottom shall be compacted

to the required SPECIFICATIONS as described later. Compaction will be done by a sheep's foot compactor, roller, or any other suitable machinery. Compaction in constricted or narrow spaces shall be done preferably by hand operated compactor.

The optimum moisture content and Proctor Density for the Zone 1 and Zone 2 MATERIALS shall be determined in accordance with ASTM D 1557-70. Compaction for Zone 1 fill shall be 90-92% at 2% above optimum moisture. For Zone 2 fill it shall be 90-95% at the optimum moisture content. Fill shall be placed in 8-inches thick loose lifts which shall be compacted to about 6-inches thickness. At least one compaction test is required for every lift of the earthwork, including the foundation, which shall be conducted by an independent and qualified/certified geotechnical firm retained by the CONTRACTOR. Testing by Nuclear Densitometer will be acceptable so long as the results are verified by at least two tests per day by the Sand Cone method. All the test results shall be submitted to the OWNER for verification and acceptance. The cost for the compaction testing is a non-pay incidental WORK item and the cost of which shall be included with other payable WORK items

#### **B. Gabions and Gabion Mattress:**

Gabions shall be galvanized steel wire mesh box-shaped baskets of various sizes of the Maccaferri type or of similar construction and quality. The baskets are filled on-site with clean hard stones or riprap. Assembly, placement, and filling of the gabions shall be in accordance with manufacturer's SPECIFICATIONS. The afore mentioned manufacturer's SPECIFICATIONS shall be supplied to the Owner. Binding or tie wires shall be U.S. gauge 13.5 and galvanized. Gabion mats shall be of the Reno mattress type or equivalent.

#### **C. Riprap:**

Riprap for use with the gabions and gabion mats shall consist of hard, dense, sound, rough fractured as nearly cubical as practicable, such as quartzite, granite or basalt. Thin slab type stones, flaking rock, rocks susceptible to solution and disintegration upon contact with standing or flowing water shall not be used. The specific gravity shall be around 2.65. Riprap size shall be between 3-inches to 8-inches (at least 50% of 8-inch size).

#### **D. Concrete:**

Concrete shall be at least 3,000 psi in compressive strength at 28 days, with 4 inch slump with air entrainment not exceeding 1%. Concrete can be delivered to or mixed on the site. The CONTRACTOR shall submit the SPECIFICATIONS of the concrete mix to the OWNER for approval.

#### **E. Filter Fabric:**

The filter fabric shall be composed of strong rot proof synthetic spunbonded polymeric fibers oriented into a stable network such that the fibers retain their relative position with respect to one

another. The fabric shall be free of any chemical treatment or coating which might significantly reduce permeability, and must have no flaws or defects which could significantly alter its physical properties. The following fabric physical property requirements must be met: Grab strength - 100 lbs; weight - 6 oz./sq. yd.; permeability - 0.50 cm/sec and; type 1120 or equivalent.

#### **4.3 EXECUTION**

##### **A. Scope of WORK:**

The WORK will consist of: Overexcavating of the erosion channel and backfilling it up with engineered fill; building of the dike extension as shown on DRAWING NO. 3; construction of the gabion spillway structure and the stilling basin, and; providing wire enclosed riprap protection for the two dike faces in contact with the spillway (please refer to DRAWING NO. 3 for dimensions and other details). Specific details of the WORK are given below:

##### **B. Construction Details:**

The sides and bottom of the erosion channel will be overexcavated to the limits shown on the drawing to remove all loose material. The floor shall be compacted and built up in 6-inch thick compacted layers. The dike foundation shall be excavated out as per the drawing and the bottom compacted. Layers of earthwork for the channel backfilling and dike construction, as well as the construction of both Zone 1 and Zone 2 fills, can proceed simultaneously. The CONTRACTOR may construct the gabion spillway simultaneously or after the completion of the earthwork as convenient. However the spillway shall be properly and tightly keyed-in on the sides and the bottom and the earthwork around it shall meet the compaction requirement. The side slopes of the extended dike shall be track walked for tightness.

The dike will be extended approximately 120 feet to encompass the spillway area and to key-in to the natural high ground on the north. Zoning of the fill, foundation, and dike dimensions/side slopes are shown on DRAWING NO. 3. The dike will be joined with the existing dike with a stepped construction (no vertical joints), as shown on DRAWING NO. 3. The top 8-inches of the old dike contact surfaces shall be scarified and mingled with the first layer of new construction with the appropriate moisture conditioning and compaction. The rest of the layers shall be constructed as shown on DRAWING NO. 3. Since, the side slopes of the existing dike are slightly steeper than the slopes specified for the dike extension, the transition of the two slopes where the new construction joins with the old dike shall be smooth. The WORK shall be coordinated with the PROJECT MANAGER and the ENGINEER.

The gabion spillway and stilling basin constructed shall be as shown in DRAWING NO. 3. A 4-inch thick layer of 3,000 psi concrete shall be placed on the top of the spillway discharge area for its protection. The concrete layer shall protrude 6-inches beyond the edge of the gabion structure. The finished discharge elevation is set at 4,213 feet. Compacted fill shall be placed against the gabion structure on the upstream side to a slope of 5 H : 1 V or flatter to conform with DRAWING NO. 3. The upstream face of the gabion spillway and the ground surface under

the stilling basin shall be covered with filter fabric. Allowance shall be made for sufficient filter fabric material around the edges of the structures to be covered for proper anchoring or tucking-in.

The PROJECT MANAGER shall verify and approve the lines and grades for the construction work, as well as the Proctor Density, earthwork compaction and moisture results provided by the CONTRACTOR retained geotechnical firm.

#### **4.4 WORK QUANTITIES**

Estimated WORK quantities are as follows: channel backfilling and foundation earthworks for dike extension and spillway - 700 bank cu. yd.; Zone 1 and Zone 2 fill MATERIALS - 650 and 850 cu. yd. respectively, compacted volume; gabion and gabion mat - 45 and 55 cu. yd. respectively; concrete - 2 cu. yd.; and 110 sq. yd. filter fabric. The CONTRACTOR is encouraged to verify the WORK during Pre-Bid site tour and get familiar with the WORK before bidding.

## **SECTION 5: SITE SPECIFIC DETAILS**

### **5.1 LOCATION OF SITES, SITE ACCESS AND GENERAL COMMENT:**

Descriptions of the eleven (11) individual mine sites and their locations are presented below. Details and dimensions are shown on the MAPS AND DRAWINGS. The CONTRACTOR will be aware that the dimensions and contours on the MAPS AND DRAWINGS are approximate. The CONTRACTOR will also be aware that minimum and maximum dimensions on the MAPS AND DRAWINGS given in the SPECIFICATIONS are specific and are to be adhered to unless such changes are approved in writing by the OWNER. The quantities presented in the specific site requirement sections should be considered as an estimate. The CONTRACTOR is encouraged to double check the quantities of various WORK items, if he/she so desires before bidding.

The major WORK Items for each site are described in Section 5.2. The common WORK to be performed at each site are as follows:

- 1) Improvement of access to the site, as needed;
- 2) Mobilization of EQUIPMENT to the sites;
- 3) Wastepile excavation and backfilling WORK in accordance with Section 3.4, as well as to meet the OWNER's radiological clean-up guideline, and the PROJECT MANAGER and CONTRACTOR shall discuss sequence of backfilling sequence prior to commencement of site earthwork;
- 4) Regrading of all disturbed areas in a manner that will ensure positive drainage around and off the reclaimed areas, and conforming with the contours as shown on the Post RECLAMATION MAPS as far as practicable.
- 5) Roughing the reclaimed surfaces with dozer tracking or by other acceptable method, as described in Section 3.4, and installing erosion protection measures, such as terraces (see DRAWING NO. 1, Figure 3 for details) on long slopes, as needed, per the direction of the PROJECT MANAGER;
- 6) Cleaning-up and removal of all refuse and waste generated by RECLAMATION activities from the sites for proper off-site disposal; and
- 7) Adherence to all applicable health and safety laws and regulations.

For locations of various WORK sites, distances of sites from nearest paved roads, between sites and technical details please refer to the MAPS AND DRAWINGS.



## **5.2 SITE SPECIFIC DETAILS (PLEASE REFER TO SITE LOCATION MAPS):**

### **1. Site NA-0155a, Charles Huskon No. 10 (please refer to Maps No. 2 & 13):**

**Location and Site Access:** Site NA-0155a is located approximately 9.5 miles ENE of Gray Mountain, AZ. The location is in N½ of Section 29, Township 28 North, Range 10 East and can be found on the USGS 7.5' quad map Cameron SE.

The site is accessed by travelling for 4.8 miles on an easterly graded dirt road coming off highway 89 at mile marker 460.95 and going due east on an unimproved dirt road for 3.3 miles. The distance from the highway to the site is approximately 8.1 miles.

**Description:** This site features a large openpit, two smaller, shallow openpits and associated wastepiles around the openpits. The site is estimated to be 28.9 acres in size. The estimated total volume of all the wastepiles is 166,300 bank cubic yards. The volumes of the individual wastepiles are as follows: WP-1: 200; WP-2: 49,500; WP-3: 41,500; WP-4: 22,000; WP-5: 47,500; WP-6: 200; and WP-7: 5,400. In addition, approximately 8,000 bank cu. yds. of earthwork for highwall grading, as shown in the map, is also necessary.

The average background Ra-226 concentrations in the first 6 inches of the soil in picoCuries per gram ( $\rho\text{Ci/g}$ ) and the background gamma emission levels 1 meter above the ground surface in microRoentgen per hour ( $\mu\text{R/hr}$ ) for this site are 6.3  $\rho\text{Ci/g}$  and 16.8  $\mu\text{R/hr}$  respectively.

Paleontological resources are present at this site. Salvaging and/or monitoring of these resources will be conducted by the Museum of Northern Arizona.

**WORK:** Site specific works are as follows:

- 1) 166,300 bank cu. yds. of openpit backfilling and site grading, and site is to be backfilled from west to east and in conformance with Section 3;
- 2) 8,000 bank cu. yds. of highwall grading/slope reduction at location marked on Map No. 2 and conforming with the DRAWING NO. 2 and Section 3; and
- 3) Regrading reclaimed areas to a slope not exceeding 3 H:1 V.

### **2. Site NA-0155b, Charles Huskon No. 10 (please refer to Maps No. 3 & 14):**

**Location and Site Access:** This site is located directly east of site NA-0155a. Site NA-0155b is located approximately 9.5 miles ENE of Gray Mountain, AZ. The location is in N½ of Section 29, Township 28 North, Range 10 East and can be found on the USGS 7.5' quad map Cameron SE. The access to the site is the same as the access to NA-0155a.



**Description:** This site features two small openpits and associated wastepiles around the openpits. The site is estimated to be 12 acres in size. The estimated volume of wastepiles is 6,500 cubic yards. The volumes of the individual wastepiles are as follows: WP-1: 600; WP-2: 50; WP-3: 600; and WP-4: 5,250.

The average background Ra-226 concentrations in the first 6 inches of the soil in picoCuries per gram ( $\rho\text{Ci/g}$ ) and the background gamma emission levels 1 meter above the ground surface in microRoentgen per hour ( $\mu\text{R/hr}$ ) for this site are 7.0  $\rho\text{Ci/g}$  and 18.7  $\mu\text{R/hr}$  respectively.

**WORK:** Site specific works are as follows:

- 1) 6,500 bank cu. yds. of openpit backfilling and site grading in conformance with Section 3; and
- 2) Regrading reclaimed areas to a slope not exceeding 5 H:1 V.
3. Site NA-0163, Ryan No. 1 (please refer to Maps No. 4 & 15):

**Location and Site Access:** This site is located on the eastern side of the Little Colorado River. The location is in NE $\frac{1}{4}$ , SE $\frac{1}{4}$ , Section 34, Township 28 North, Range 10 East and can be found on the USGS 7.5' quad map Cameron SE.

The site is accessed by traveling on Indian Route 6730 for about 9.5 miles from the junction of 6730 and highway 89 and continuing on an unimproved dirt road to the east for about 0.18 miles.

**Description:** This site features one openpit and associated wastepiles around the pit. The site is estimated to be 7.5 acres in size. The estimated volume of wastepiles is 25,500 bank cu. yds. The volumes of the individual wastepiles are as follows: WP-1: 11,000 and WP-2: 14,500.

The average background Ra-226 concentrations in the first 6 inches of the soil in picoCuries per gram ( $\rho\text{Ci/g}$ ) and the background gamma emission levels 1 meter above the ground surface in microRoentgen per hour ( $\mu\text{R/hr}$ ) for this site are 2.6  $\rho\text{Ci/g}$  and 11.9  $\mu\text{R/hr}$  respectively.

**WORK:** Site specific works are as follows:

- 1) 25,500 bank cu. yds. of openpit backfilling and site grading in conformance with Section 3;
- 2) Installation of approximately 520 linear feet of drainage diversion earthwork (approximately 433 bank cu. yds.) as specified on Map No. 15 and conforming with DRAWING NO. 1, Figure 1; and
- 3) Regrading reclaimed areas to a slope not exceeding 5 H:1 V.

**4. Site NA-0166, Charles Huskon No. 11 (please refer to Maps No. 5 & 16):**

**Location and Site Access:** The site is accessed by traveling for 7.5 miles on an easterly graded dirt road coming off highway 89 at mile marker 460.95 and going due east on an unimproved dirt road for 1.75 miles. The distance from the highway to the site is approximately 9.25 miles. The access goes through, Section 4, Township 27 North, Range 10 East, land administered by the Bureau of Reclamation. The site is on the west side of the Little Colorado River and can be found on the USGS 7.5' quad map Cameron SE.

**Description:** This site features a large openpit and associated wastepiles around the pit. The site is estimated to be 27.3 acres in size. The estimated volume of wastepiles is 60,400 cubic yards. The volumes of the individual wastepiles are as follows: WP-1: 100; WP-2: 2,000; WP-3: 7,800; WP-4: 3,450; WP-5: 31,550; WP-6: 3,600; WP-7: 5,850; WP-8: 250; WP-9: 100; and WP-10: 5,700.

The average background Ra-226 concentrations in the first 6 inches of the soil in picoCuries per gram ( $\mu\text{Ci/g}$ ) and the background gamma emission levels 1 meter above the ground surface in microRoentgen per hour ( $\mu\text{R/hr}$ ) for this site are 13.0  $\mu\text{Ci/g}$  and 31.3  $\mu\text{R/hr}$  respectively.

Paleontological resources are present at this site. Salvaging and/or monitoring of these resources will be conducted by the Museum of Northern Arizona.

**WORK:** Site specific works are as follows:

- 1) 60,400 bank cu. yds. of openpit backfilling and site grading in conformance with Section 3;
- 2) Regrading reclaimed areas to a slope not exceeding 3 H:1 V; and
- 3) Removing the boundary fence with gate (about 1000 feet long), from Point A to Point B (see Map No. 5), storing temporarily, and reinstalling the same after the completion of the RECLAMATION work, after necessary repair or replacement of damaged portions. This is a non-pay incidental WORK item and the cost of which shall be included with other payable WORK items.

**5. Site NA-0172a, RAMCO No. 21 (please refer to Maps No. 6 & 17):**

**Location and Site Access:** This site is located on the east side of the Little Colorado River. The site is in NW¼, Section 11, Township 27 North, Range 10 East and can be found on the USGS 7.5' quad map Wupatki NE.

The site is accessed by traveling on Indian Route 6730 for about 10.5 miles from the junction

of 6730 and highway 89 and continuing on an unimproved dirt road for approximately 0.10 miles.

**Description:** This site features a large openpit, two smaller pits and associated wastepiles around the pit. The site is estimated to be 20 acres in size. The estimated volume of wastepiles is 66,500 cubic yards. The volumes of the individual wastepiles are as follows: WP-1: 15,700; WP-2: 1,000; WP-3: 7,200; and WP-4: 42,600.

The average background Ra-226 concentrations in the first 6 inches of the soil in picoCuries per gram ( $\mu\text{Ci/g}$ ) and the background gamma emission levels 1 meter above the ground surface in microRoentgen per hour ( $\mu\text{R/hr}$ ) for this site are 4.4  $\mu\text{Ci/g}$  and 14.6  $\mu\text{R/hr}$  respectively.

Paleontological resources are present at this site. Salvaging and/or monitoring of these resources will be conducted by the Museum of Northern Arizona.

**WORK:** Site specific works are as follows:

- 1) 66,500 bank cu. yds. of openpit backfilling and site grading in conformance with Section 3;
- 2) Installation of approximately 400 linear feet of drainage diversion earthwork (approximately 333 cu. yds.) as specified on Map No. 17 and conforming with DRAWING NO. 1, Figure 1.
- 3) Regrading reclaimed areas to a slope not exceeding 3 H:1 V.

**6. Site NA-0172b, RAMCO No. 21 (please refer to Maps No. 7 & 17):**

**Location and Site Access:** This site is located on the east side of the Little Colorado River. The site is in NW $\frac{1}{4}$ , Section 11, Township 27 North, Range 10 East and can be found on the USGS 7.5' quad map Wupatki NE.

The site is accessed by traveling on Indian Route 6730 for about 10.5 miles from the junction of 6730 and highway 89 and continuing on an unimproved dirt road for approximately 0.10 miles and through NA-0172a.

**Description:** This site features a large openpit and one large wastepile north of the pit. The site is estimated to be 18.7 acres in size. The estimated volume of the one wastepile is 35,700 bank cu. yds.

The average background Ra-226 concentrations in the first 6 inches of the soil in picoCuries per gram ( $\mu\text{Ci/g}$ ) and the background gamma emission levels 1 meter above the ground surface in microRoentgen per hour ( $\mu\text{R/hr}$ ) for this site are 4.0  $\mu\text{Ci/g}$  and 13.9  $\mu\text{R/hr}$  respectively.

Paleontological resources are present at this site. Salvaging and/or monitoring of these resources will be conducted by the Museum of Northern Arizona.

**WORK:** Site specific works are as follows:

- 1) 35,700 bank cu. yds. of openpit backfilling and site grading in conformance with Section 3;
- 2) Regrading reclaimed areas to a slope not exceeding 3 H:1 V.

**7. Site NA-0173, RAMCO No. 22 (please refer to Maps No. 8 & 18):**

**Location and Site Access:** This site is located on the east side of the Little Colorado River. The site is in N½, Section 11, Township 27 North, Range 10 East and can be found on the USGS 7.5' quad map Wupatki NE.

The site is accessed by traveling on Indian Route 6730 for about 10.5 miles from the junction of 6730 and highway 89 and continuing on an unimproved dirt road for approximately 0.40 miles and through NA-0172a and NA-0174.

**Description:** This site features a large openpit and two associated wastepiles nearby. The site is estimated to be 21.4 acres in size. The estimated volume of wastepiles is 56,400 bank cu. yds. The volumes of the individual wastepiles are as follows: WP-1: 44,900; and WP-2: 11,500.

The average background Ra-226 concentrations in the first 6 inches of the soil in picoCuries per gram ( $\rho\text{Ci/g}$ ) and the background gamma emission levels 1 meter above the ground surface in microRoentgen per hour ( $\mu\text{R/hr}$ ) for this site are 4.1  $\rho\text{Ci/g}$  and 14.0  $\mu\text{R/hr}$  respectively.

Paleontological resources are present at this site. Salvaging and/or monitoring of these resources will be conducted by the Museum of Northern Arizona.

**WORK:** Site specific works are as follows:

- 1) 56,400 bank cu. yds. of openpit backfilling and site grading in conformance with Section 3;
- 2) Installation of approximately 300 linear feet of drainage diversion earthwork (approximately 250 cu. yds.) as specified on Map No. 18 and conforming with DRAWING NO. 1, Figure 1.
- 3) Regrading reclaimed areas to a slope not exceeding 3 H : 1 V.

**8. Site NA-0174, RAMCO No. 20 (please refer to Maps No. 9 & 19):**

**Location and Site Access:** This site is located on the east side of the Little Colorado River. The site is in NW¼, Section 11, Township 27 North, Range 10 East and can be found on the USGS 7.5' quad map Wupatki NE.

The site is accessed by traveling on Indian Route 6730 for about 10.5 miles from the junction of 6730 and highway 89 and continuing on an unimproved dirt road for approximately 0.25 miles and through NA-0172a.

**Description:** This site features a two openpits and associated wastepiles surrounding the pits. The site is estimated to be 15.3 acres in size. The estimated volume of wastepiles is 27,200 bank cu. yds. The volumes of the individual wastepiles are as follows: WP-1: 3,000; WP-2: 10,600; and WP-3: 13,600.

The RECLAMATION of this site also includes the repair of an eroding spillway of an earthen water catchment dike near this site. See Map No. 9 and Map No. 19 for location of the spillway.

The average background Ra-226 concentrations in the first 6 inches of the soil in picoCuries per gram ( $\mu\text{Ci/g}$ ) and the background gamma emission levels 1 meter above the ground surface in microRoentgen per hour ( $\mu\text{R/hr}$ ) for this site are 4.5  $\mu\text{Ci/g}$  and 15.6  $\mu\text{R/hr}$  respectively.

**WORK:** Site specific works are as follows:

- 1) 27,200 bank cu. yds. of openpit backfilling and site grading in conformance with Section 3;
- 2) Installation of approximately 840 linear feet of drainage diversion earthwork (approximately 700 cu. yds.) as specified on Map No. 18 and conforming with DRAWING NO. 1, Figure 1.
- 3) Regrading reclaimed areas to a slope not exceeding 5 H:1 V.
- 4) Repairing the spillway as specified in **SECTION 4: REBUILDING OF SPILLWAY NEAR NA-0174 and DRAWING NO. 3.**

**9. Site NA-0175, Ryan No. 2 (please refer to Maps No. 10 & 20):**

**Location and Site Access:** This site is located on the east side of the Little Colorado River. The site is in NE¼, SE¼, SW¼, Section 11, Township 27 North, Range 10 East and can be found on USGS 7.5' quad map Wupatki NE.

The site is accessed by traveling on Indian Route 6730 for about 10.5 miles from the junction

of 6730 and highway 89 and continuing on an unimproved dirt road for approximately 0.40 miles and going through NA-0172a, NA-0174 and NA-0173.

**Description:** This site features two openpits and associated wastepiles surrounding the pits. The site is estimated to be 109 acres in size. The estimated volume of wastepiles is 703,300 bank cu. yds. The volumes of the individual wastepiles are as follows: WP-1: 250; WP-2: 69,550; WP-3: 443,000; WP-4: 42,500; WP-5: 106,600; and WP-6: 41,400. In addition, approximately 4,000 bank cu. yds. of earthwork for highwall grading, as shown on the map, is also necessary.

The average background Ra-226 concentrations in the first 6 inches of the soil in picoCuries per gram ( $\mu\text{Ci/g}$ ) and the background gamma emission levels 1 meter above the ground surface in microRoentgen per hour ( $\mu\text{R/hr}$ ) for this site are 3.6  $\mu\text{Ci/g}$  and 14.3  $\mu\text{R/hr}$  respectively.

Paleontological resources are present at this site. Salvaging/monitoring of these resources will be conducted by the Museum of Northern Arizona.

Because of the size of this site, the RECLAMATION earthwork will be done in a sequence to allow for sufficient time for paleontological and radiological monitoring.

**WORK:** Site specific works are as follows:

- 1) This site is to be reclaimed in a sequence from west to east: The west area (includes WP-5 and WP-6) will be reclaimed first, then the middle area (includes WP-3 and WP-4, and lastly the east area (includes WP-1 and WP-2);
- 2) 703,300 bank cu. yds. of openpit backfilling and site grading in conformance with Section 3;
- 3) 4,000 bank cu. yds. of highwall grading/slope reduction at location marked on Map No. 10 and conforming with DRAWING NO. 2 and Section 3.4 C;
- 4) Installation of approximately 1,030 linear feet of drainage diversion and berm earthwork (approximately 907 bank cu. yds.) as specified on Map No. 20 and conforming with DRAWING NO. 1, Figure 1 and Figure 2; and
- 5) Regrading reclaimed areas to a slope of 5 H:1 V, but not exceeding 3 H:1 V.

10. Site NA-0179, Yazzie No. 1 (please refer to Maps No. 11 & 21):

**Location and Site Access:** This site is located on the east side of the Little Colorado River. The site is in NE $\frac{1}{4}$ , Section 15, Township 27 North, Range 10 East and can be found on the USGS 7.5' quad map Wupatki NE.

The site is accessed by traveling for about 11.5 miles on Indian Route 6730 from the junction of 6730 and highway 89 and continuing to the west on an unimproved dirt road for approximately, through NA-0180, for about 0.22 miles.

**Description:** This site features a rimstrip and associated wastepiles. The site is estimated to be 8.8 acres in size. The estimated volume of wastepiles is 11,300 bank cu. yds. The volumes of the individual wastepiles are as follows: WP-1: 3,800; WP-2: 3,100; and WP-3: 4,400. In addition, approximately 800 bank cu. yds. of earthwork for highwall grading, as shown in the MAP, is also necessary.

The average background Ra-226 concentrations in the first 6 inches of the soil in picoCuries per gram ( $\rho\text{Ci/g}$ ) and the background gamma emission levels 1 meter above the ground surface in microRoentgen per hour ( $\mu\text{R/hr}$ ) for this site are 3.4  $\rho\text{Ci/g}$  and 13.7  $\mu\text{R/hr}$  respectively.

**WORK:** Site specific works are as follows:

- 1) 11,300 bank cu. yds. of openpit backfilling and site grading in conformance with Section 3;
- 2) 800 bank cu. yds. of highwall grading/slope reduction at location marked on Map No. 11 and conforming with DRAWING NO. 2 and Section 3.4 C;
- 3) Regrading reclaimed areas to a slope of 5 H:1 V, but not exceeding 3 H:1 V.

#### 11. Site NA-0180, Yazzie No 2 (please refer to Maps No. 12 & 22):

**Location and Site Access:** This site is located on the east side of the Little Colorado River. The site is in NE $\frac{1}{4}$ , Section 15, Township 27 North, Range 10 East and can be found on the USGS 7.5' quad map Wupatki NE.

The site is accessed by traveling for about 11.5 miles on Indian Route 6730 from the junction of 6730 and highway 89. This site is located on both sides of 6730.

**Description:** This site features a large openpit and associated wastepiles around the pit. The site is estimated to be 32.5 acres in size. The estimated volume of wastepiles is 75,750 bank cu. yds. The volumes of the individual wastepiles are as follows: WP-1: 6,600; WP-2: 34,400; WP-3: 3,800; WP-4: 50; WP-5: 100; WP-6: 29,800; and WP-7: 1,000.

The average background Ra-226 concentrations in the first 6 inches of the soil in picoCuries per gram ( $\rho\text{Ci/g}$ ) and the background gamma emission levels 1 meter above the ground surface in microRoentgen per hour ( $\mu\text{R/hr}$ ) for this site are 2.8  $\rho\text{Ci/g}$  and 12.5  $\mu\text{R/hr}$  respectively.

**WORK:** Site specific works are as follows:

- 1) 75,750 bank cu. yds. of openpit backfilling and site grading in conformance with Section 3;
- 2) Installation of approximately 540 linear feet of V-ditches (approximately 220 bank cu. yds.) along both sides of Navajo Route Road 6730 to allow for proper drainage, as shown on Map No. 22 and conforming with DRAWING NO. 1, Figure 4.
- 3) Regrading reclaimed areas to a slope of 5 H:1 V, but not exceeding 3 H:1 V.



## SECTION 6: RADIOLOGICAL CLEAN-UP GUIDELINE AND WORK-SAFETY

The mine waste at all the sites contains low level radioactivity. But the level is such that the RECLAMATION WORK can be safely conducted if the applicable health and safety standards are strictly followed.

The average background Ra-226 concentrations in the first 6 inches of the soil in picoCuries per gram ( $\mu\text{Ci/g}$ ) and the background gamma emission levels 1 meter above the ground surface for the AML sites in microRoentgen per hour ( $\mu\text{R/hour}$ ) are shown on the site maps and in Section 5. The AML sites must be reclaimed in such a manner that the residual Ra-226 concentration in the first 6 inches of the reclaimed soil shall not exceed 25  $\mu\text{Ci/g}$ , and in addition, the residual gamma emission from the reclaimed surfaces shall not exceed 50  $\mu\text{R/hour}$ . Accomplishing the specified RECLAMATION technique in accordance with the backfill sequence will ensure compliance with the OWNERS's radiological guidelines. The OWNER's personnel will monitor these parameters during the RECLAMATION WORK to ensure compliance with the radiological clean-up guideline. The OWNER's personnel will make their best efforts to perform the radiological monitoring expeditiously. The CONTRACTOR will not move to the next site unless all WORK is completed and verified to comply with the radiological clean-up guidelines at the previous site. The OWNER's HEALTH PHYSICIST has the final decision making authority as to radiological clean-up guidelines.

All the CONTRACTOR'S personnel working in the PROJECT must attend a mandatory training in use of personnel protective EQUIPMENT, radiation protection, general work safety and personal hygiene provided by the HEALTH PHYSICIST before the CONTRACT personnel are allowed to be on WORK site. The CONTRACTOR will comply with all the applicable occupational and radiation health and safety standards. Periodic inspections will be made to ensure compliance by the CONTRACTOR'S personnel with these standards. The CONTRACTOR will be provided with a health and safety manual for compliance.

The CONTRACTOR shall provide an enclosed walk through access control trailer for accessing and departing the WORK site with minimum dimensions of 20 ft. L x 10 ft. W. The enclosed control station will be furnished to enable the HEALTH PHYSICIST's personnel to frisk the CONTRACTOR'S personnel prior to departing the WORK site. In addition to the access control trailer, a generator (maximum output of 5,000 watts, 4,500 watts rated and 120V/240V AC output) is to be furnished.

The CONTRACTOR must provide separate Thermoluminescent dosimeter (TLD) badges to all his employees for radiation monitoring purpose. This shall be coordinated with the HEALTH PHYSICIST. These badges shall be purchased from an approved vendor and be replaced on a quarterly basis, subject to the HEALTH PHYSICIST's approval. The exchange of TLD badges will be coordinated with the HEALTH PHYSICIST. Urine samples for bioassay testing is a requirement of this PROJECT. One entrance and one exit sample is required from every person on the PROJECT. During the duration of the PROJECT, random quarterly samples will be collected from personnel selected by the HEALTH PHYSICIST from each job classification shall

be required. The cost for the TLD badges and the bioassay will be borne by the Contractor as an incidental cost.

To minimize the risk of radiation exposure to the PROJECT personnel and to ensure compliance with the OWNER's radiological clean-up guideline, the HEALTH PHYSICIST will plan, organize and carry out the following monitoring and control functions: 1) Access control, including radiation surveys of all EQUIPMENT prior to proceeding on to PROJECT site, to confine radionuclides inside the PROJECT areas and decontaminate personnel; 2) Personal radiation monitoring by periodic frisking, use of TLD badges and bioassays; 3) Radiological monitoring of the mine wastepiles and the reclaimed areas for characterization and ensuring compliance with OWNER's clean-up guideline; 4) Air-quality monitoring for dust particulates and radionuclides; 5) Prior to demobilization, decontamination will be performed on all EQUIPMENT to locate potential surface contamination. Cooperation of the CONTRACTOR with the monitoring personnel is mandatory and expected. The CONTRACTOR's pace of WORK must not create an undue pressure on the monitoring personnel.

Dust suppression during RECLAMATION WORK is mandatory. The CONTRACTOR shall supply a water truck of at least 5,000 gallon capacity with adequate water pressure. If the working condition is dusty, the WORK shall be temporarily suspended for health and safety reasons. All EQUIPMENT cabs will have air tight enclosures and be air conditioned or air cooled to minimize contaminants to workers. During WORK, workers will use approved air filters or respirators (in good condition) to prevent inhalation of dust.

All WORK will stop immediately when an accident and/or injury occurs and the OWNER must be notified immediately.

Eating, drinking, smoking and chewing gum/tobacco are not allowed within the PROJECT boundaries of AML sites. The CONTRACTOR shall comply with other safety and hygienic requirements/standards, such as providing personnel protective EQUIPMENT/gear for PROJECT personnel and the CONTRACTOR'S authorized visitors, decontamination of WORK clothes, EQUIPMENT etc., as stipulated by the HEALTH PHYSICIST or his/her delegate. Contaminated EQUIPMENT and vehicles will be decontaminated by scraping, brushing, washing and wiping.

CONTRACTOR will be provided with a health and safety manual for compliance. All applicable health and safety rules, regulations and guidelines, i.e. OSHA, MSHA, the OWNER's radiological clean-up guideline, etc. shall be followed.

## **SECTION 7: CULTURAL, FISH & WILDLIFE and PALEONTOLOGICAL RESOURCES PROTECTION**

Although, there are no cultural and fish & wildlife resources protection stipulations for this PROJECT, mitigation measures for salvaging and monitoring of paleontological resources and exclusion of sensitive sites or outcrops are in effect for this PROJECT. This section provides a summary of various stipulations to protect cultural resources, and fish and wildlife if discovery or protection of such resources become required. The CONTRACTOR shall comply with the stipulations in this section during the course of the RECLAMATION construction WORK, as applicable.

### **7.1 Stipulations for the Protection of Cultural Resources:**

1. All RECLAMATION activities shall be restricted to within the boundaries of the PROJECT areas.
2. All vehicular traffic shall be restricted to the existing road ways within and outside of the PROJECT areas except during on site actual RECLAMATION activities at the mine sites themselves.
3. Should previously unrecorded cultural resources (i.e. archaeological deposits, human remains, or locations reportedly associated with Native American religious/traditional beliefs or practices) be identified all operations in the immediate vicinity of the discovery must cease and the Navajo Nation Historic Preservation Department must be notified at 520-871-7132.

### **7.2 Stipulations for the Protection of Fish and Wildlife:**

1. All unnecessary damage to habitat should be avoided; RECLAMATION activities should be restricted to areas previously disturbed by mining activities and to approved borrow areas.
2. Only existing access roads shall be used to prevent impact to threatened and endangered species.
3. Construction WORK shall not degrade surface or ground water quality.
4. Eagle monitoring shall be performed by the Navajo Nation if construction is to take place during the time frame of February through August.

### **7.3 Stipulations for Salvaging and Monitoring of Paleontological Resources:**

Eight (8) of the eleven (11) PROJECT sites require mitigation measures for the protection of paleontologic resources during RECLAMATION WORK. The stipulations for salvaging, monitoring and exclusion for this PROJECT will be made available to the successful BIDDER only. The CONTRACTOR shall become familiar with the scope of WORK for the paleontological salvage and monitoring to be performed and the exclusion areas at each respective PROJECT site.

## **MAPS AND DRAWINGS**

### **MAPS:**

Map No. 1	Cameron AMLR Project 3 Map
Map No. 2	NA-0155a Project Map
Map No. 3	NA-0155b Project Map
Map No. 4	NA-0163 Project Map
Map No. 5	NA-0166 Project Map
Map No. 6	NA-0172a Project Map
Map No. 7	NA-0172b Project Map
Map No. 8	NA-0173 Project Map
Map No. 9	NA-0174 Project Map
Map No. 10	NA-0175 Project Map
Map No. 11	NA-0179 Project Map
Map No. 12	NA-0180 Project Map
Map No. 13	NA-0155a Post Reclamation Map
Map No. 14	NA-0155b Post Reclamation Map
Map No. 15	NA-0163 Post Reclamation Map
Map No. 16	NA-0166 Post Reclamation Map
Map No. 17	NA-0172a&b Post Reclamation Map
Map No. 18	NA-0173 Post Reclamation Map
Map No. 19	NA-0174 Post Reclamation Map
Map No. 20	NA-0175 Post Reclamation Map
Map No. 21	NA-0179 Post Reclamation Map
Map No. 22	NA-0180 Post Reclamation Map

### **DRAWINGS:**

DRAWING NO. 1: Details of Diversion Channels and Berms

DRAWING NO. 2: Typical Cross Section of an Openpit Showing Wastepiles, Back-fill Sequence and Scope of WORK

DRAWING NO. 3: Spillway Repair Near Site NA-0174

**NOTE: MAPS AND DRAWINGS are provided under separate cover.**

**MAPS**  
**and**  
**DRAWINGS**

# **CAMERON AML RECLAMATION PROJECT 3 MAPS AND DRAWINGS**

## **MAPS:**

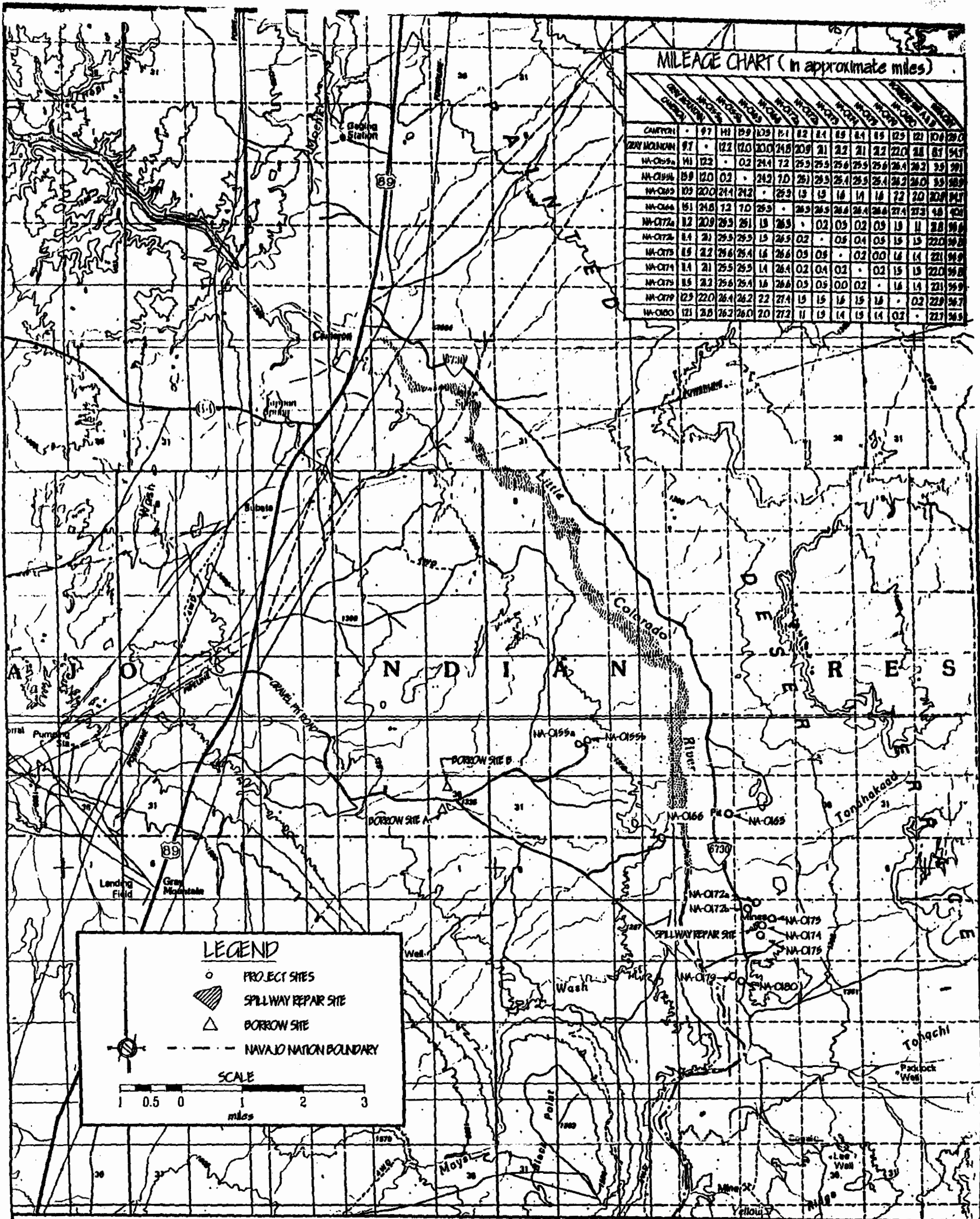
MAP NO. 1	PROJECT LOCATION MAP
MAP NO. 2	NA-0155a PROJECT MAP
MAP NO. 3	NA-0155b PROJECT MAP
MAP NO. 4	NA-0163 PROJECT MAP
MAP NO. 5	NA-0166 PROJECT MAP
MAP NO. 6	NA-0172a PROJECT MAP
MAP NO. 7	NA-0172b PROJECT MAP
MAP NO. 8	NA-0173 PROJECT MAP
MAP NO. 9	NA-0174 PROJECT MAP
MAP NO. 10	NA-0175 PROJECT MAP
MAP NO. 11	NA-0179 PROJECT MAP
MAP NO. 12	NA-0180 PROJECT MAP
MAP NO. 13	NA-0155a POST RECLAMATION MAP
MAP NO. 14	NA-0155b POST RECLAMATION MAP
MAP NO. 15	NA-0163 POST RECLAMATION MAP
MAP NO. 16	NA-0166 POST RECLAMATION MAP
MAP NO. 17	NA-0172a&b POST RECLAMATION MAP
MAP NO. 18	NA-0173 POST RECLAMATION MAP
MAP NO. 19	NA-0174 POST RECLAMATION MAP
MAP NO. 20	NA-0175 POST RECLAMATION MAP
MAP NO. 21	NA-0179 POST RECLAMATION MAP
MAP NO. 22	NA-0180 POST RECLAMATION MAP

## **DRAWINGS:**

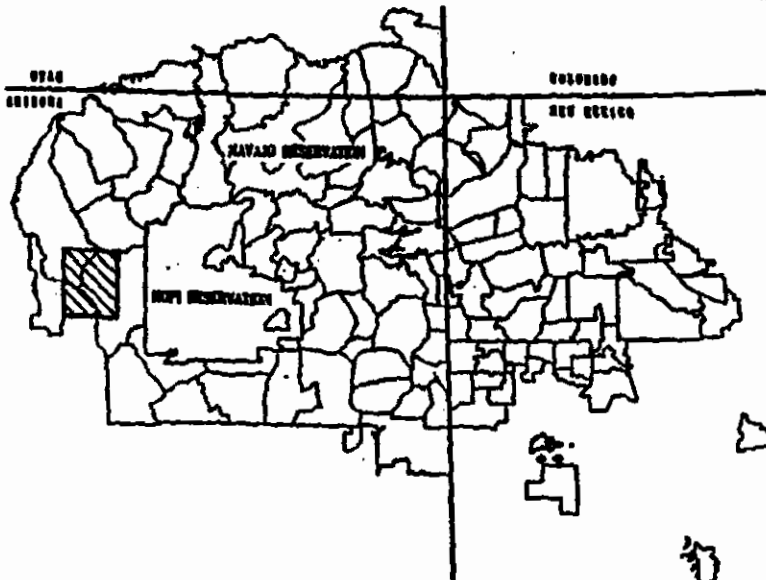
DRAWING NO. 1:	DETAILS OF DIVERSION DITCHES, BERMS, TERRACES AND ROADWAY DRAINAGES
DRAWING NO. 2:	TYPICAL CROSS SECTION OF AN OPENPIT SHOWING BACKFILL SEQUENCE, AND HIGHWALL GRADING
DRAWING NO. 3:	SPILLWAY REPAIR NEAR SITE NA-0174





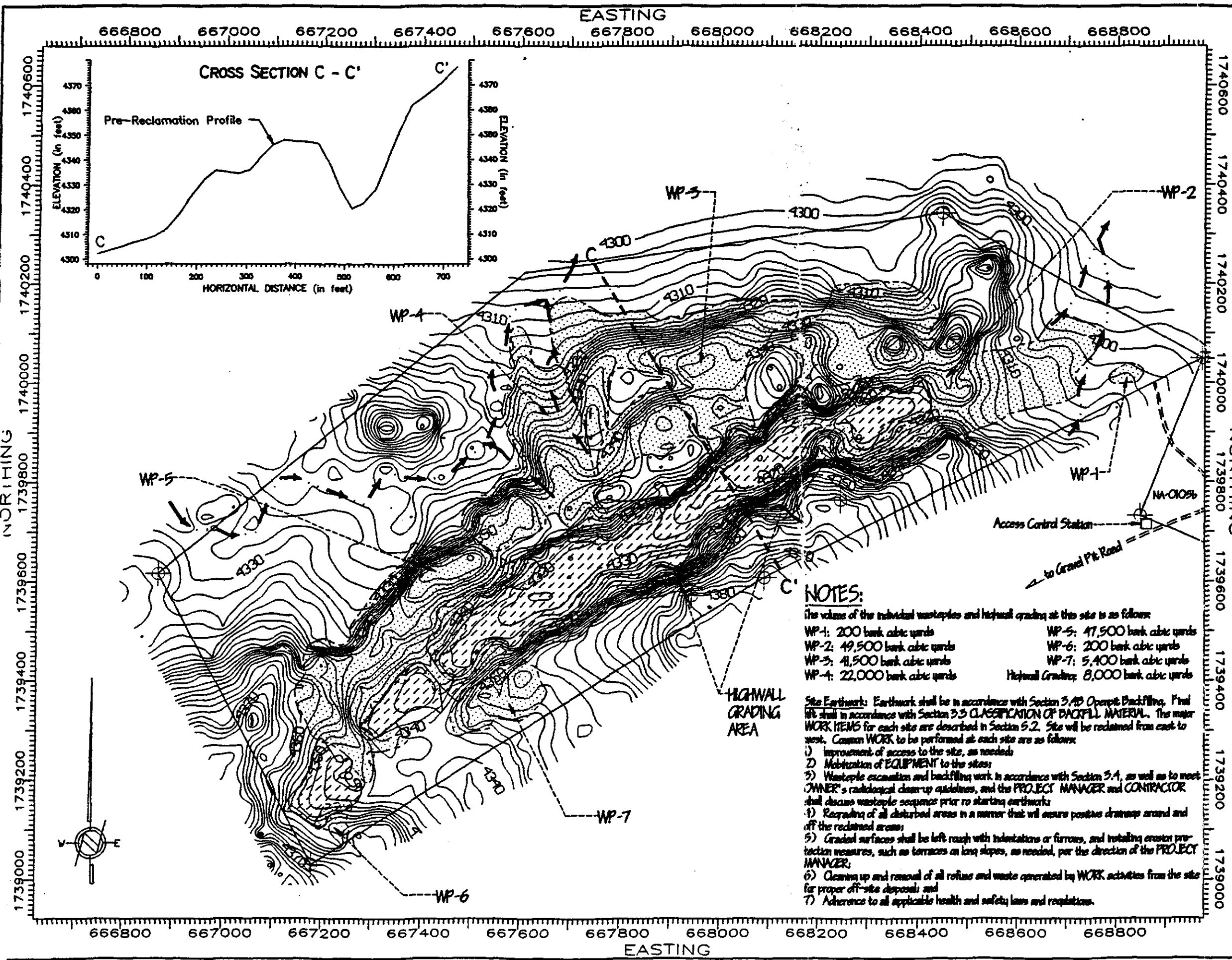


	CACTARI	22V MOUNTAIN	NA-C155a	NA-C155b	NA-C156	NA-C157a	NA-C157b	NA-C158	NA-C159	NA-C160	NA-C161	NA-C162	NA-C163	NA-C164	NA-C165	NA-C166	NA-C167	NA-C168	NA-C169	NA-C170	NA-C171	NA-C172	NA-C173	NA-C174	NA-C175	NA-C176	NA-C177	NA-C178	NA-C179	NA-C180
CACTARI	0	97	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
22V MOUNTAIN	97	0	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
NA-C155a	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C155b	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C156	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C157a	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C157b	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C158	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C159	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C160	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C161	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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NA-C163	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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NA-C166	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C167	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C168	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C169	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C170	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C171	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C172	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C173	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C174	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C175	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C176	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C177	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C178	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C179	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA-C180	122	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



**CAMERON AML RECLAMATION PROJECT No.3**  
**MAP No. 1: PROJECT LOCATION MAP**  
 Drawn By: Tony Robbins  
 Date: 09 SEPTEMBER 1995  
 Approved By: S. D. M. M.  
 Date: 10/27/95  
 \* THE NAVAJO NATION \* DIVISION OF NATURAL RESOURCES \*  
 NAVAJO ABANDONED MINE LAND RECLAMATION DEPARTMENT  
 \* Tuba City AML Program \* Tuba City, Arizona 86045 \*





**CAMERON AML RECLAMATION PROJECT No.3**  
**MAP No. 2: PROJECT MAP**  
**NA-0155a CHARLES HUSKON No. 10**

Contour Interval: 2 Feet  
 Scale: 1 in. = 200 ft.  
 Site Area: 28.92 Acres  
 Total Volume of WP: 166,300 cu. yd.  
 - RADIOLOGICAL DATA -  
 Background Measurement (contact): 6.27 pCi/g  
 Background Measurement (1 meter): 16.81 uR/hr

- LEGEND:**
- Control Point (rebar)
  - Road/Jeep Trail
  - Waste Pile/Stock Pile (WP)
  - Pit/Rimstrip (PIT)
  - Drainage/Water Body (arrows show direction of flow)
  - Site Boundary

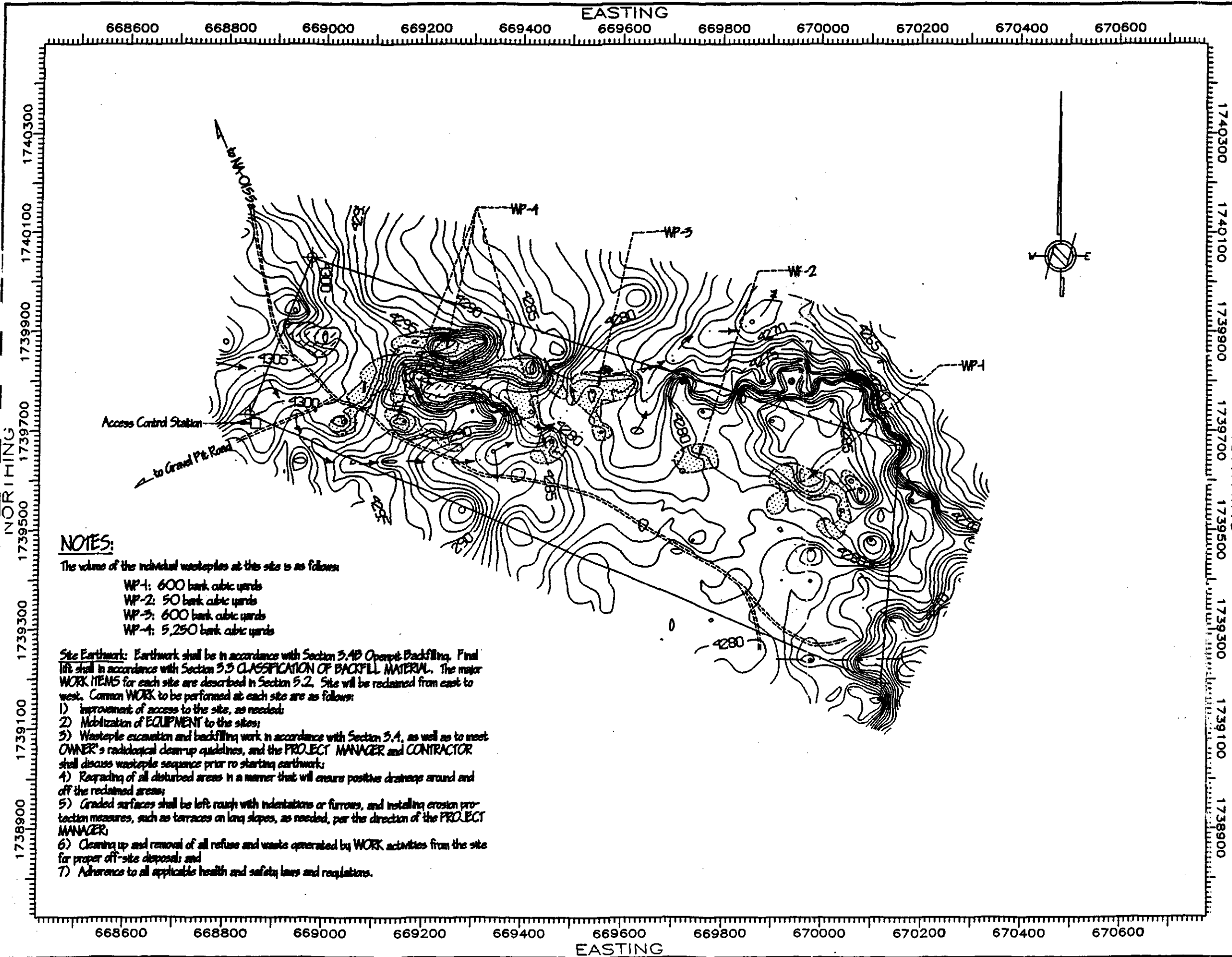
**NOTES:**  
 The volume of the individual wastepiles and highwall grading at this site is as follows:  
 WP-1: 200 bank cubic yards  
 WP-2: 49,500 bank cubic yards  
 WP-3: 41,500 bank cubic yards  
 WP-4: 22,000 bank cubic yards  
 WP-5: 47,500 bank cubic yards  
 WP-6: 200 bank cubic yards  
 WP-7: 5,400 bank cubic yards  
 Highwall Grading: 8,000 bank cubic yards

**Site Earthwork:** Earthwork shall be in accordance with Section 3.4D Open Pit Backfilling. Final lift shall be in accordance with Section 3.5 CLASSIFICATION OF BACKFILL MATERIAL. The major WORK ITEMS for each site are described in Section 5.2. Site will be reclaimed from east to west. Common WORK to be performed at each site are as follows:  
 1) Improvement of access to the site, as needed;  
 2) Mobilization of EQUIPMENT to the sites;  
 3) Wastepile excavation and backfilling work in accordance with Section 3.4, as well as to meet OWNER's radiological clean-up guidelines, and the PROJECT MANAGER and CONTRACTOR shall discuss wastepile sequence prior to starting earthwork;  
 4) Regrading of all disturbed areas in a manner that will ensure positive drainage around and off the reclaimed areas;  
 5) Graded surfaces shall be left rough with indentations or furrows, and installing erosion protection measures, such as terraces on long slopes, as needed, per the direction of the PROJECT MANAGER;  
 6) Cleaning up and removal of all refuse and waste generated by WORK activities from the site for proper off-site disposal; and  
 7) Adherence to all applicable health and safety laws and regulations.

- NOTES:**
1. Easting and Northing are in AZ State Plane (Central Zone) Grid Bearings.
  2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/g, and/or 1 (one) meter measurements of 50 uR/hr.
  3. For Backfill Sequence, Please refer to appropriate sections of the Technical Specifications and Drawing No. 2.
  4. For Post reclamation contours, refer to Map No. 13.

Drawn By: T. ROBBINS Date: 28 JULY 1995  
 Approved By: S. Dale Wilson Date: 2/11/97  
 Revision(s): 10/22/96-TR 1/31/97-TR  
 Data Collected By: Tony Whitehorse, et al.  
 Date(s): 04/28-30/92 & 05/19/92

**THE NAVAJO NATION \* DIVISION OF NATURAL RESOURCES**  
**NAVAJO ABANDONED MINE LANDS RECLAMATION DEPT.**  
 Tuba City Field Office \* Tuba City, Arizona 86045



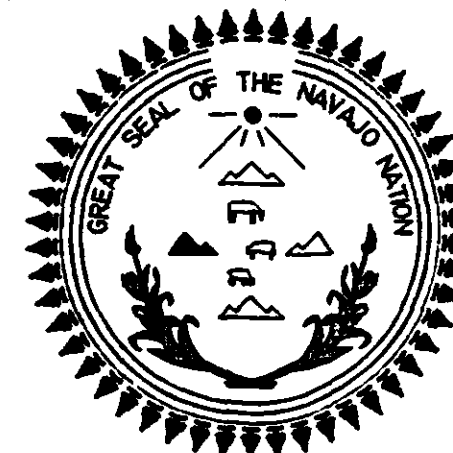
# **NOTES:**

The volume of the individual wastepiles at this site is as follows:

- WP-1: 600 bank cubic yards
- WP-2: 50 bank cubic yards
- WP-3: 600 bank cubic yards
- WP-4: 5,250 bank cubic yards

Site Earthwork: Earthwork shall be in accordance with Section 5.4B Openpit Backfilling. Final lift shall be in accordance with Section 5.5 CLASSIFICATION OF BACKFILL MATERIAL. The major WORK ITEMS for each site are described in Section 5.2. Site will be reclaimed from east to west. Common WORK to be performed at each site are as follows:

- 1) Improvement of access to the site, as needed;
- 2) Mobilization of EQUIPMENT to the sites;
- 3) Wastepile excavation and backfilling work in accordance with Section 5.4, as well as to meet OWNER's radiological clean-up guidelines, and the PROJECT MANAGER and CONTRACTOR shall discuss wastepile sequence prior to starting earthwork;
- 4) Regrading of all disturbed areas in a manner that will ensure positive drainage around and off the reclaimed areas;
- 5) Graded surfaces shall be left rough with indentations or furrows, and installing erosion protection measures, such as terraces on long slopes, as needed, per the direction of the PROJECT MANAGER;
- 6) Cleaning up and removal of all refuse and waste generated by WORK activities from the site for proper off-site disposal; and
- 7) Adherence to all applicable health and safety laws and regulations.



CAMERON AML RECLAMATION PROJECT No.3  
MAP No. 3: PROJECT MAP  
NA-0155b CHARLES HUSKON No. 10

Contour Interval: 1 foot  
Scale: 1 in. = 200 ft.  
Site Area: 12.09 Acres  
Total Volume of WP: 6,500 cu. yd.  
- RADIOLOGICAL DATA -  
Background Measurement (contact): 6.99 pCi/g  
Background Measurement (1 meter): 18.65 uR/hr

## **LEGEND:**

- Control Point (rebar)
- Road/Jeep Trail
- Waste Pile/Stock Pile (WP)
- Pit/Rimstrip (PIT)
- Drainage/Water Body
- Site Boundary

## **NOTES:**

1. Easting and Northings are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/g and/or 1 (one) meter measurements of 50 uR/hr.
3. For Backfill Sequence, Please refer to appropriate sections of the Technical Specifications and Drawing No. 2.
4. For Post reclamation contours, refer to Map No. 14.

Drawn By: T. Robbins Date: 28 JULY 1995

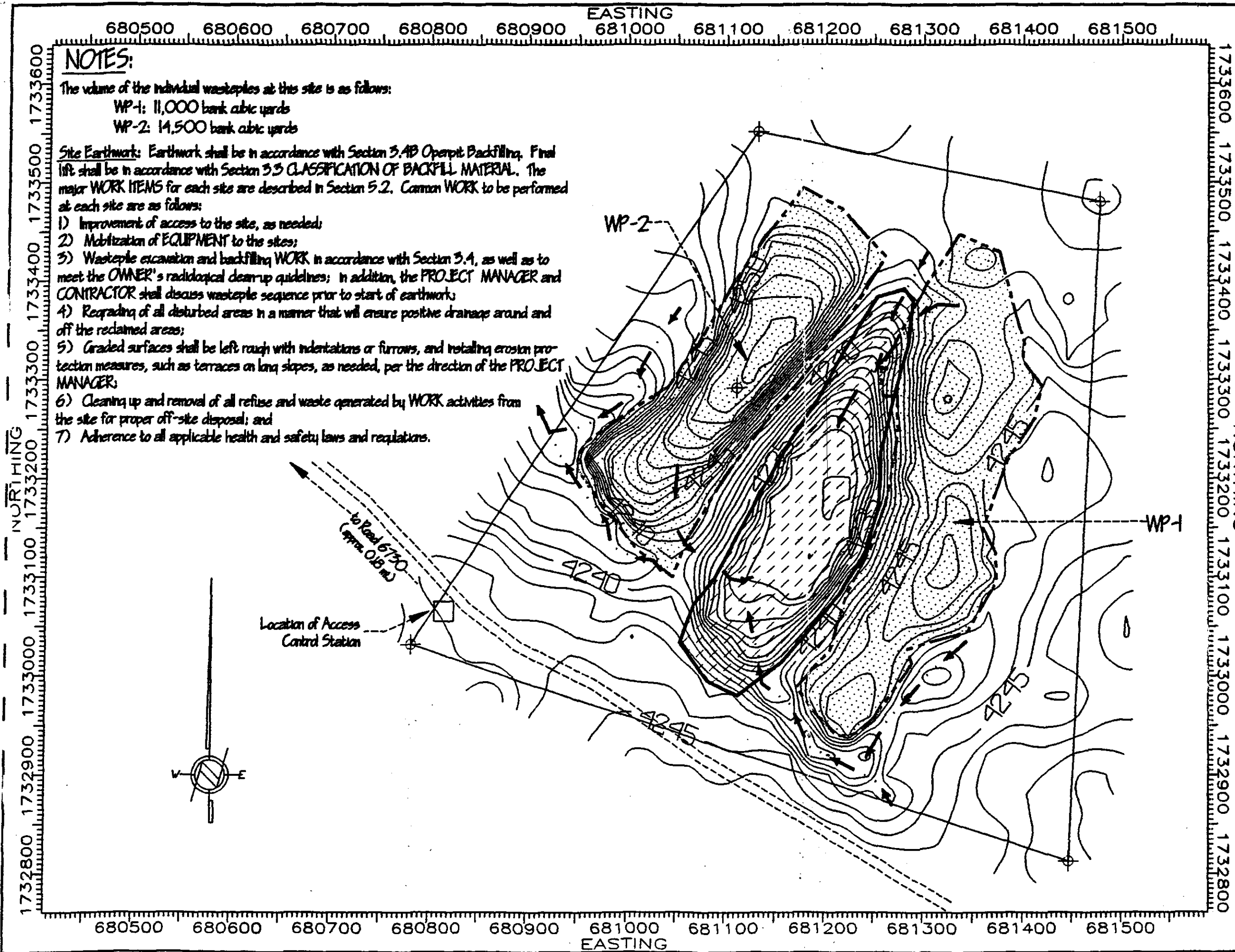
Approved By: S. Deh Misa Date: 2/11/97

Revision(s): 10/22/96 - 1R 1/31/97 - 1R

Data Collected By: Tony Whitehorse, et al.

Date(s): May 20, 1992

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NAVAJO ABANDONED MINE LANDS RECLAMATION DEPT.  
Tuba City Field Office \* Tuba City, Arizona 86045



# NOTES:

The volume of the individual wastepiles at this site is as follows:

- WP-1: 11,000 bank cubic yards
- WP-2: 14,500 bank cubic yards

Site Earthwork: Earthwork shall be in accordance with Section 3.4B Openpit Backfilling. Final lift shall be in accordance with Section 3.5 CLASSIFICATION OF BACKFILL MATERIAL. The major WORK ITEMS for each site are described in Section 5.2. Common WORK to be performed at each site are as follows:

- 1) Improvement of access to the site, as needed;
- 2) Mobilization of EQUIPMENT to the sites;
- 3) Wastepile excavation and backfilling WORK in accordance with Section 3.4, as well as to meet the OWNER's radiological clean-up guidelines; in addition, the PROJECT MANAGER and CONTRACTOR shall discuss wastepile sequence prior to start of earthwork;
- 4) Regrading of all disturbed areas in a manner that will ensure positive drainage around and off the reclaimed areas;
- 5) Graded surfaces shall be left rough with indentations or furrows, and installing erosion protection measures, such as terraces on long slopes, as needed, per the direction of the PROJECT MANAGER;
- 6) Cleaning up and removal of all refuse and waste generated by WORK activities from the site for proper off-site disposal; and
- 7) Adherence to all applicable health and safety laws and regulations.



CAMERON AML RECLAMATION PROJECT No.3  
MAP No. 4: PROJECT MAP  
NA-0163 RYAN No. 1

Contour Interval: 1 foot  
Scale: 1 in. = 100 ft.  
Site Area: 7.52 Acres  
Total Volume of WP: 25,500 cu. yd.  
- RADIOLOGICAL DATA -  
Background Measurement (contact): 256 pCi/g  
Background Measurement (1 meter): 11.90 uR/hr

## LEGEND:

- + Control Point (rebar)
- Road/JEEP Trail
- WP Waste Pile/Stock Pile (WP)
- PIT Pit/Rimstrip (PIT)
- Drainage/Water Body (Arrows show direction of flow)
- Site Boundary

## NOTES:

1. Easting and Northing are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/g, and/or 1 (one) meter measurements of 50 uR/hr.
3. For Backfill Sequence, Please refer to appropriate sections of the Technical Specifications and Drawing No. 2.
4. For Post reclamation contours, refer to Map No. 15.

Drawn By: TRobbins Date: 11 August 1993  
Approved By: S. Deb Nisn Date: 2/11/97  
Revision(s): 10/22/96 - 1R 2/5/97 JH  
Data Collected By: Tony Whitehorse, et al.  
Date(s): January 30 - 31, 1993

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Tuba City Field Office \* Tuba City, Arizona 86045



674000 674200 674400 674600 674800 675000 675200 675400 675600 675800 676000

**NOTES:**

The volumes of the individual wastepiles is as follows:

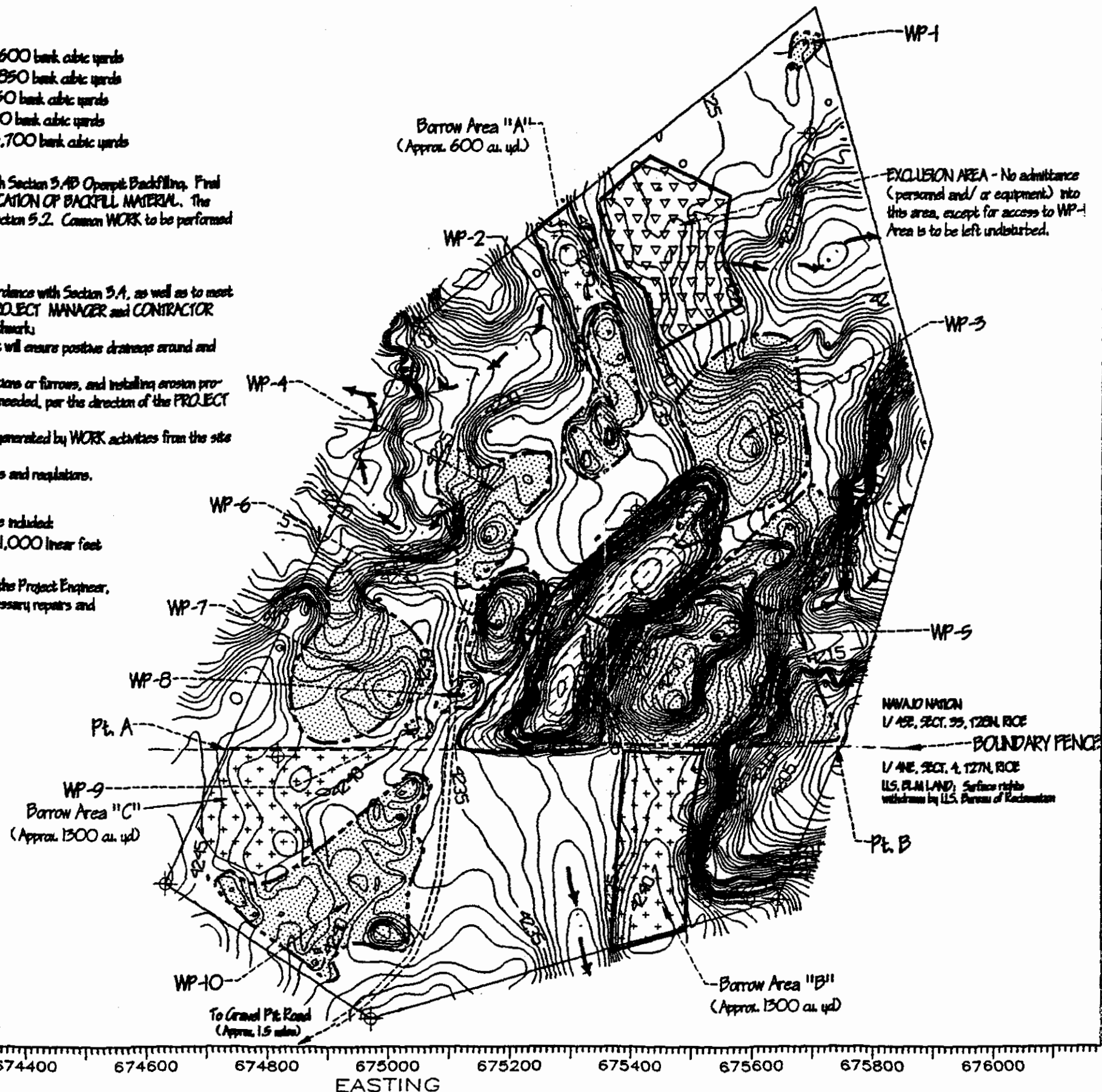
WP-1: 100 bank cubic yards	WP-6: 3,600 bank cubic yards
WP-2: 2,000 bank cubic yards	WP-7: 5,850 bank cubic yards
WP-3: 7,800 bank cubic yards	WP-8: 250 bank cubic yards
WP-4: 3,450 bank cubic yards	WP-9: 100 bank cubic yards
WP-5: 31,550 bank cubic yards	WP-10: 5,700 bank cubic yards

**Site Earthwork:** Earthwork shall be in accordance with Section 5.4B Openpit Backfilling. Final lift shall be in accordance with Section 5.3 CLASSIFICATION OF BACKFILL MATERIAL. The major WORK ITEMS for each site are described in Section 5.2. Common WORK to be performed at each site are as follows:

- 1) Improvement of access to the site, as needed;
- 2) Mobilization of EQUIPMENT to the sites;
- 3) Wastepile excavation and backfilling work in accordance with Section 5.4, as well as to meet OWNER's radiological clean-up guidelines, and the PROJECT MANAGER and CONTRACTOR shall discuss wastepile sequence prior to start of earthwork;
- 4) Regrading of all disturbed areas in a manner that will ensure positive drainage around and off the reclaimed areas;
- 5) Graded surfaces shall be left rough with indentations or furrows, and installing erosion protection measures, such as terraces on long slopes, as needed, per the direction of the PROJECT MANAGER;
- 6) Cleaning up and removal of all refuse and waste generated by WORK activities from the site for proper off-site disposal and
- 7) Adherence to all applicable health and safety laws and regulations.

IN ADDITION TO ABOVE WORK, the following shall be included:

- a) Include with access improvement, approximately 1,000 linear feet (pt. A to pt. B) of Boundary Fence; and
- b) Upon approval of the Project Manager and/or the Project Engineer, the Boundary Fence will be reinstalled with necessary repairs and replacement parts.



CAMERON AML RECLAMATION PROJECT No. 3  
MAP No. 5: PROJECT MAP  
NA-0166 CHARLES HUSKON No. 11

Contour Interval: 1 foot

Scale: 1 in. = 200 ft.

Site Area: 27.29 Acres

Total Volume of WP: 60,400 bank cu. yd.

- RADIOLOGICAL DATA -

Background Measurement (contact): 12.99 pCi/g

Background Measurement (1 meter): 31.34 uR/hr

**LEGEND:**

- ⊕ Control Point (rebar)
- Road/Jeep Trail
- Waste Pile/Stock Pile (WP)
- ▨ Pit/Rimstrip (PIT)
- ↗ Drainage/Water Body (Arrows show direction of flow)
- Site Boundary

**NOTES:**

1. Easting and Northings are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/g and/or 1 (one) meter measurements of 50 uR/hr.
3. For Backfill Sequence, Please refer to appropriate sections of the Technical Specifications and Drawing No. 2.
4. For Post reclamation contours, refer to Map No. 16.

Drawn By: T. Robins Date: 12 September 1995

Approved By: S. Delo WSR Date: 2/11/97

Revision(s): 10/25/96 - TR 2/5/97 - JL

Data Collected By: Tony Whitehorse, et al.

Date(s): April 08-10, 21, 1992

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Tuba City Field Office \* Tuba City, Arizona 86045

EASTING

681200 681400 681600 681800 682000 682200 682400 682600 682800 683000 683200 683400

## NOTES:

The volume of the individual wastepiles at this site is as follows:

- WP-1: 15,700 bank cubic yards  
 WP-2: 1,000 bank cubic yards  
 WP-3: 7,200 bank cubic yards  
 WP-4: 42,600 bank cubic yards

Site Earthwork: Earthwork shall be in accordance with Section 3.40 Openpit Backfilling. Final lift shall be in accordance with Section 3.5 CLASSIFICATION OF BACKFILL MATERIAL. The major WORK ITEMS for each site are described in 5.2. Common WORK to be performed at each site are as follows:

- 1) Improvement of access to the site, as needed;
- 2) Mobilization of EQUIPMENT to the site;
- 3) Wastepile excavation and backfilling work in accordance with Section 3.4, as well as to meet OWNER's radiological cleanup guidelines, and the PROJECT MANAGER and CONTRACTOR shall discuss wastepile sequence prior to starting earthwork;
- 4) Regrading of all disturbed areas in a manner that will ensure positive drainage around and off the reclaimed areas;
- 5) Graded surfaces shall be left rough with indentations or furrows, and installing erosion protection measures, such as terraces on long slopes, as needed, per the direction of the PROJECT MANAGER;
- 6) Cleaning up and removal of all refuse and waste generated by WORK activities from the site for proper off-site disposal; and
- 7) Adherence to all applicable health and safety laws and regulations.

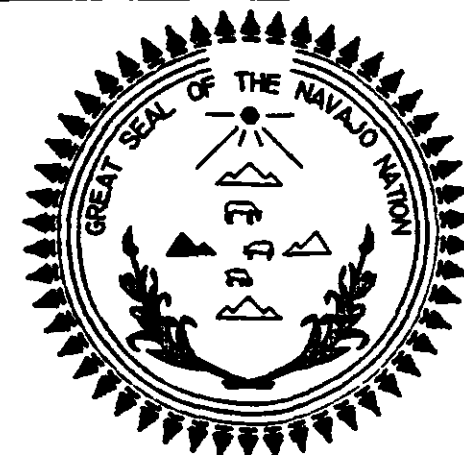
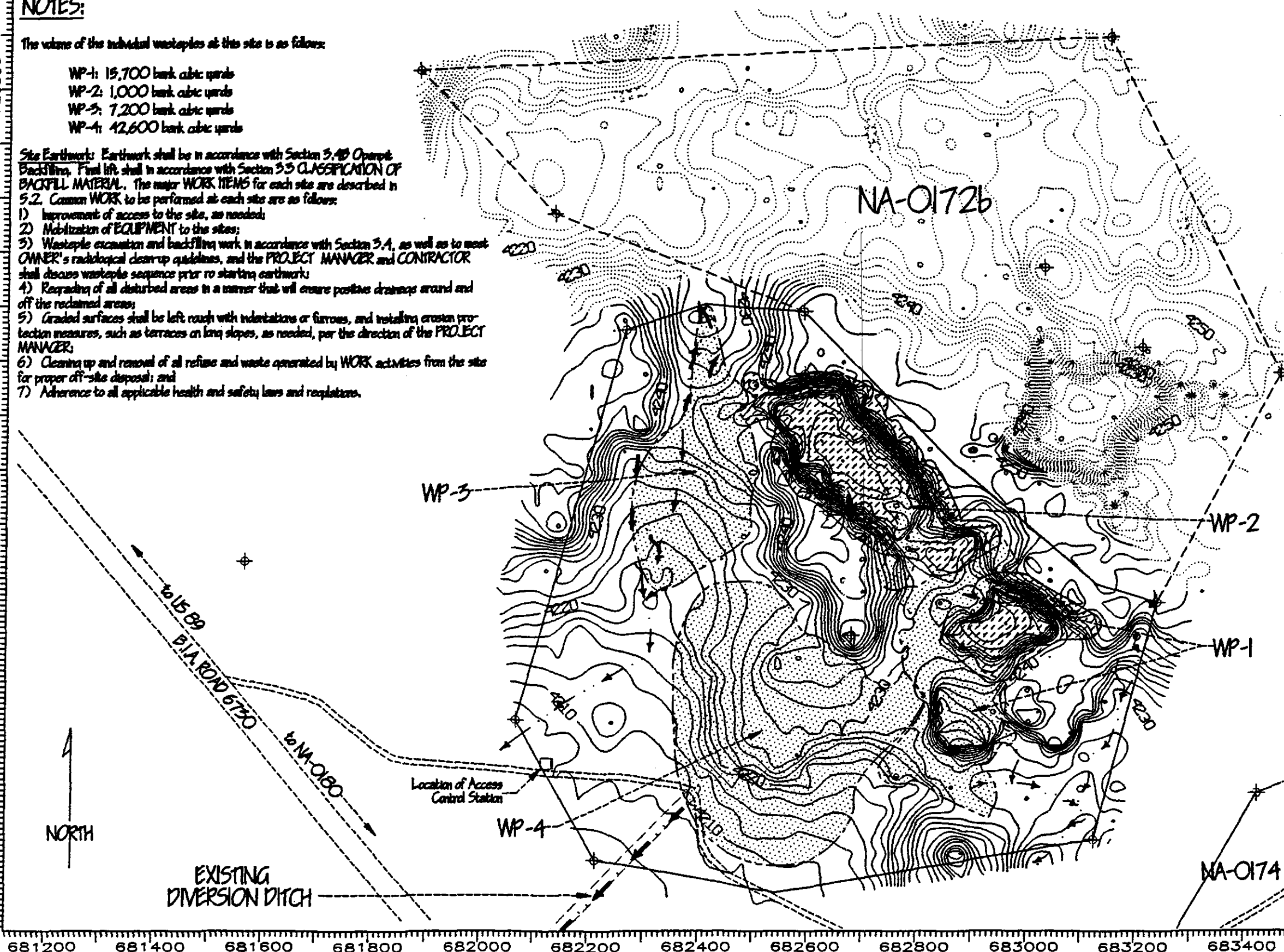
NORTHING

1726000  
1725800  
1725600  
1725400  
1725200  
1725000  
1724800  
1724600

NORTHING

1726000  
1725800  
1725600  
1725400  
1725200  
1725000  
1724800  
1724600

EASTING



CAMERON AML RECLAMATION PROJECT No.3  
 MAP No. 6: PROJECT MAP  
 NA-0172a RAMCO No. 21

Contour Interval: 1 foot

Scale: 1 in. = 200 ft.

Site Area: 20.05 Acres

Total Volume of WP: 66,500 cu. yd.

- RADIOLOGICAL DATA -

Background Measurement (contact): 4.55 pCi/g

Background Measurement (1 meter): 14.57 uR/hr

## LEGEND:

- ⊕ Control Point (rebar)
- Road/Jeep Trail
- ▨ Waste Pile/Stock Pile (WP)
- ▩ Pit/Rimstrip (PIT)
- Drainage/Water Body (Arrows show direction of flow)
- Site Boundary

## NOTES:

1. Easting and Northings are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/g, and/or 1 (one) meter measurements of 50 uR/hr.
3. For Backfill Sequence, Please refer to appropriate sections of the Technical Specifications and Drawing No. 2.
4. For Post reclamation contours, refer to Map No. 17.

Drawn By: Tony Robbins Date: Sept. 12, 1995

Approved By: S. Deb M'sre Date: 2/11/97

Revision(s): 10/25/96 - TR 2/5/97 TR

Data Collected By: Tony Whitehorse, et al.

Date(s): February 11-12, 1992

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 Tuba City Field Office \* Tuba City, Arizona 86045

EASTING

681200 681400 681600 681800 682000 682200 682400 682600 682800 683000 683200 683400

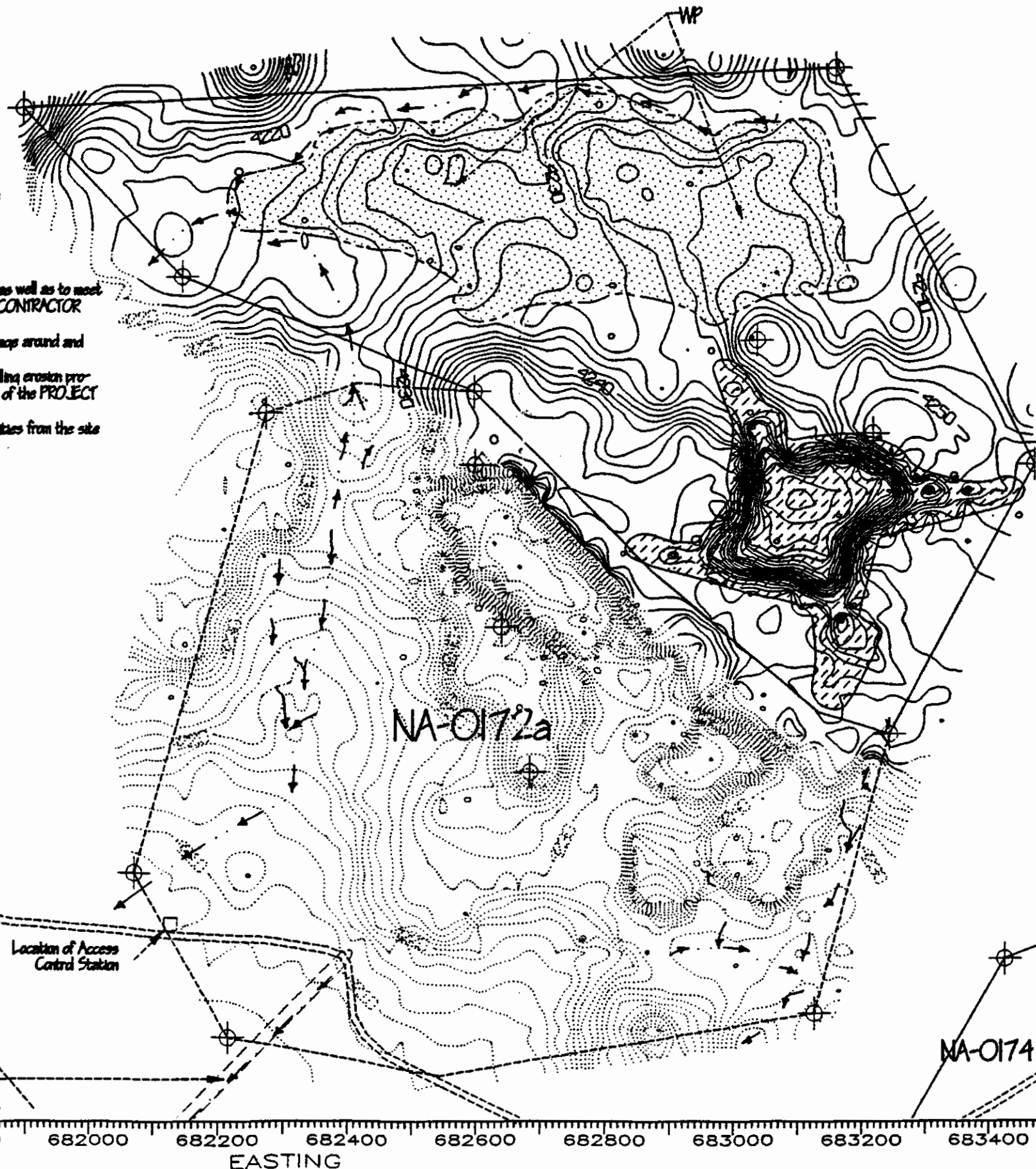
## NOTES:

The volume of the individual wastepiles at this site is as follows:

WP-4: 35,700 bank cubic yards

Site Earthwork: Earthwork shall be in accordance with Section 5.4B Open Pit Backfilling. Final lift shall be in accordance with Section 5.5 CLASSIFICATION OF BACKFILL MATERIAL. The major WORK ITEMS for each site are described in 5.2. Common WORK to be performed at each site are as follows:

- 1) Improvement of access to the site, as needed;
- 2) Mobilization of EQUIPMENT to the sites;
- 3) Wastepile excavation and backfilling work in accordance with Section 5.4, as well as to meet OWNER's radiological cleanup guidelines, and the PROJECT MANAGER and CONTRACTOR shall discuss wastepile sequence prior to starting earthwork;
- 4) Regrading of all disturbed areas in a manner that will ensure positive drainage around and off the reclaimed areas;
- 5) Graded surfaces shall be left rough with indentations or furrows, and installing erosion protection measures, such as terraces on long slopes, as needed, per the direction of the PROJECT MANAGER;
- 6) Cleaning up and removal of all refuse and waste generated by WORK activities from the site for proper off-site disposal; and
- 7) Adherence to all applicable health and safety laws and regulations.



CAMERON AML RECLAMATION PROJECT No.3  
MAP No. 7: PROJECT MAP  
NA-0172b RAMCO No. 21

Contour Interval: 1 foot

Scale: 1 in. = 200 ft.

Site Area: 18.74 Acres

Total Volume of WP: 35,700 cu. yd.

- RADIOLOGICAL DATA -

Background Measurement (contact): 395 pCi/g

Background Measurement (1 meter): 1385 uR/hr

## LEGEND:

- ⊕ Control Point (rebar)
- Road/Jeep Trail
- WP Waste Pile/Stock Pile (WP)
- PIT Pit/Rimstrip (PIT)
- Drainage/Water Body (Arrows show direction of flow)
- Site Boundary

## NOTES:

1. Easting and Northings are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/g and/or 1 (one) meter measurements of 50 uR/hr.
3. For Backfill Sequence, Please refer to appropriate sections of the Technical Specifications and Drawing No. 2.
4. For Post reclamation contours, refer to Map No. 17.

Drawn By: Tony Robbins Date: Sept. 12, 1995

Approved By: S. Dubois Date: 2/11/97

Revision(s): 10/25/96-TR 2/5/97 TR

Data Collected By: Tony Whitehorse, et al.

Date(s): February 11-12 & 19, 1992

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NAVAJO ABANDONED MINE LANDS RECLAMATION DEPT.  
Tuba City Field Office \* Tuba City, Arizona 86045





NORTHING

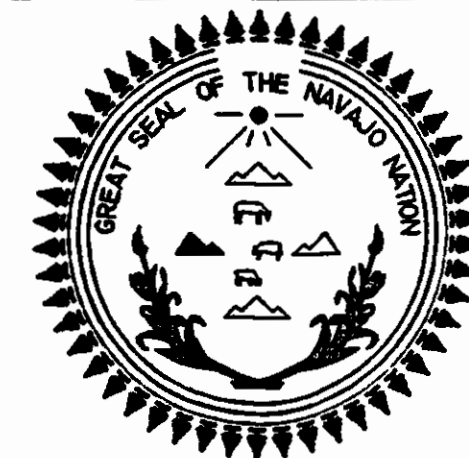
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1723800  
1724000  
1724200  
1724400  
1724600  
1724800  
1725000

682300 682500 682700 682900 683100 683300 683500 683700 683900 684100 684300

EASTING

682300 682500 682700 682900 683100 683300 683500 683700 683900 684100 684300

EASTING

1723600  
1723800  
1724000  
1724200  
1724400  
1724600  
1724800  
1725000  
NORTHING

CAMERON AML RECLAMATION PROJECT No.3  
MAP No. 9: PROJECT MAP  
NA-0174 RAMCO No. 20

Contour Interval: 1 foot

Scale: 1 in. = 200 ft.

Site Area: 15.31 Acres

Total Volume of WP: 27,200 cu. yd.

- RADIOLOGICAL DATA -

Background Measurement (contact): 4.46 pCi/g

Background Measurement (1 meter): 15.61 uR/hr

#### LEGEND:

- Control Point (rebar)
- Road/Jeep Trail
- Waste Pile/Stock Pile (WP)
- Pit/Rimstrip (PIT)
- Drainage/Water Body (Arrows show direction of flow)
- Site Boundary

#### NOTES:

1. Easting and Northings are in AZ State Plans (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/g, and/or 1 (one) meter measurements of 50 uR/hr.
3. For Backfill Sequence, Please refer to appropriate sections of the Technical Specifications and Drawing No. 2.
4. For Post reclamation contours, refer to Map No. 19.

Drawn By: T. Robbins Date: Oct. 09, 1995

Approved By: S. Delo Wign Date: 2/11/97

Revision(s): 10/25/96-TR 2/5/97 TR

Data Collected By: Tony Whitehorse, et al.

Date(s): February 25-27, 1992

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Tuba City Field Office \* Tuba City, Arizona 86045

#### NOTES:

The volume of the individual wastepiles at this site is as follows:

WP-1: 3,000 bank cubic yards

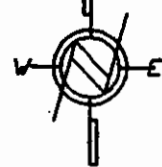
WP-2: 10,600 bank cubic yards

WP-3: 13,600 bank cubic yards

Site Earthwork: Earthwork shall be in accordance with Section 3.4B Openpit Backfilling. Final lift shall be in accordance with Section 3.3 CLASSIFICATION OF BACKFILL MATERIAL. The major WORK ITEMS for each site are described in Section 5.2. Common WORK to be performed at each site are as follows:

- 1) Improvement of access to the site, as needed;
- 2) Mobilization of EQUIPMENT to the sites;
- 3) Wastepile excavation and backfilling work in accordance with Section 3.4, as well as to meet OWNER's radiological clean-up guidelines, and the PROJECT MANAGER and CONTRACTOR shall discuss wastepile sequence prior to starting earthwork;
- 4) Regrading of all disturbed areas in a manner that will ensure positive drainage around and off the reclaimed areas;
- 5) Graded surfaces shall be left rough with indentations or furrows, and installing erosion protection measures, such as terraces on long slopes, as needed, per the direction of the PROJECT MANAGER;
- 6) Cleaning up and removal of all refuse and waste generated by WORK activities from the site for proper off-site disposal; and
- 7) Adherence to all applicable health and safety laws and regulations.

IN ADDITION TO THE ABOVE WORK, a spillway of an earthen water catchment dike will be repaired along with the RECLAMATION of this site. Refer to DRAWING No. 3 and Section 4 of the Technical Specifications.



to Access Control  
Station & Road 6750

Spillway Area

Erosion Channel

Dike

NA-0172b

NA-0172a

NA-0174

WP-2

WP-3

WP-1

NA-0175



NORTHING

EASTING

683200 683600 684000 684400 684800 685200 685600 686000 686400 686800 687200 687600

S' - S Profile



# NOTES:

- 1) Site Earthwork: Earthwork shall be in accordance with Section 5.4B Openpit Backfilling. Final lift shall be in accordance with Section 5.5 CLASSIFICATION OF BACKFILL MATERIAL. The major WORK ITEMS for each site are described in Section 5.2. Site will be reclaimed from east to west. Common WORK to be performed at each site are as follows:
- 2) Improvement of access to the site, as needed;
- 3) Mobilization of EQUIPMENT to the sites;
- 4) Waste pile excavation and backfilling work in accordance with Section 5.4, as well as to meet OWNER's radiological cleanup guidelines, and the PROJECT MANAGER and CONTRACTOR shall discuss waste pile sequence prior to starting earthwork;
- 5) Regrading of all disturbed areas in a manner that will ensure positive drainage around and off the reclaimed areas;
- 6) Graded surfaces shall be left rough with indentations or furrows, and installing erosion protection measures, such as terraces on long slopes, as needed, per the direction of the PROJECT MANAGER;
- 7) Cleaning up and removal of all refuse and waste generated by WORK activities from the site for proper off-site disposal; and
- 8) Adherence to all applicable health and safety laws and regulations.

NA-0172a

NA-0173

NA-0174

To Road 6730 and Access Control Station at NA-0172a

Water Catchment Dike

WP-5

WP-4

S'

WP-3

WP-2

WP-1

WP-6

HIGHWALL GRADING AREA

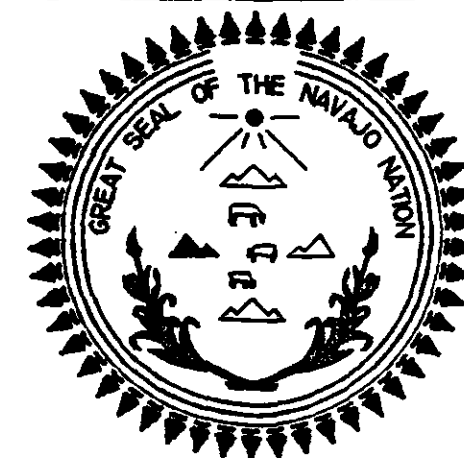
## NOTES (continued):

The volume of the individual wastepiles and highwall grading at this site is as follows:

- WP-1: 250 bank cubic yards
- WP-2: 69,550 bank cubic yards
- WP-3: 443,000 bank cubic yards
- WP-4: 42,500 bank cubic yards
- WP-5: 106,600 bank cubic yards
- WP-6: 41,400 bank cubic yards
- Highwall Grading: 4,000 bank cubic yards

This site will be reclaimed in "areas" from West to East to accommodate radiological and paleontological monitoring.

The location of the access control is located at the southwest corner of site NA-0172a. See Map No. 6 for location.



CAMERON AML RECLAMATION PROJECT No.3  
MAP No.10: PROJECT MAP  
NA-0175 RYAN No. 2

Contour Interval: 2 Feet

Scale: 1 in. = 400 ft.

Site Area: 109.06 Acres

Total Volume of WP: 703,300 cu. yd.

- RADIOLOGICAL DATA -

Background Measurement (contact): 3.64 pCi/g

Background Measurement (1 meter): 14.31 uR/hr

## LEGEND:

- Control Point (rebar)
- Road/Jeep Trail
- Waste Pile/Stock Pile (WP)
- Pit/Rimstrip (PIT)
- Drainage/Water Body (shows flow direction of flow)
- Site Boundary

## NOTES:

1. Easting and Northings are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements shall not exceed contact measurements of 25 pCi/g, and/or 1 (one) meter measurements of 50 uR/hr.
3. For Backfill Sequence, Please refer to appropriate sections of the Technical Specifications and Drawing No. 2.
4. For Post reclamation contours, refer to Map No. 20.

Drawn By: T. Robbins Date: August 9, 1995

Approved By: S. Dels Miser Date: 2/11/97

Revision(s): 10/24/96 - TR 2/5/97 - TR

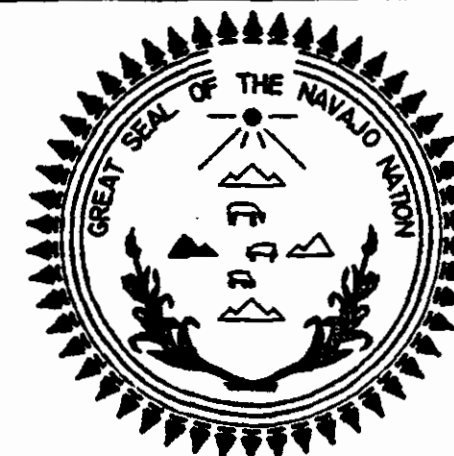
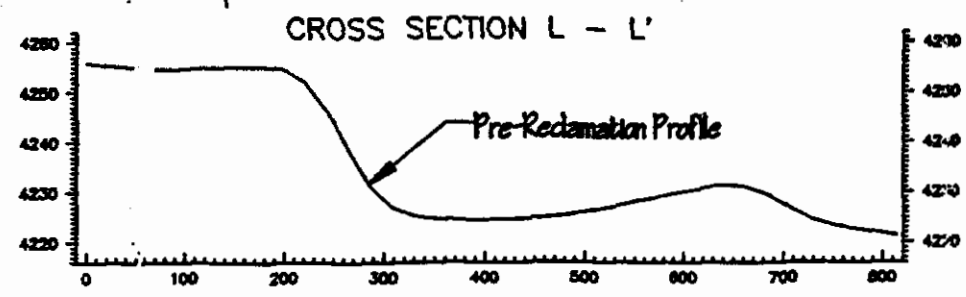
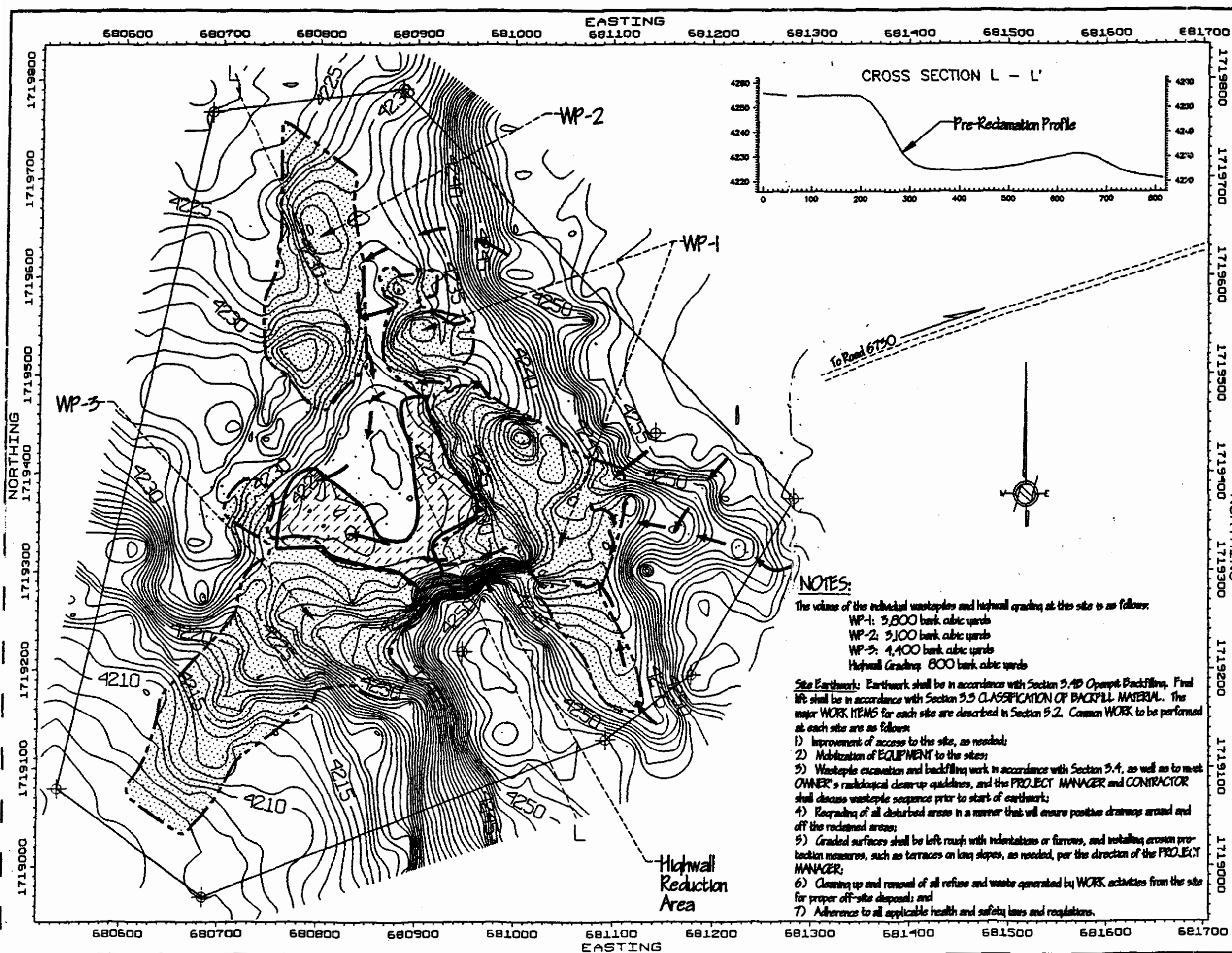
Data Collected By: Tony Whitehorse, et al.

Date(s): Feb. 27-28, Mar. 18-26, Apr. 7, 1992

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Tuba City Field Office \* Tuba City, Arizona 86045

EASTING

NORTHING



**CAMERON AML RECLAMATION PROJECT No.3  
MAP No. 11: PROJECT MAP  
NA-0179 YAZZIE No. 1**

Contour Interval: 1 Foot

Scale: 1 in. = 100 ft.

Site Area: 8.76 Acres

Total Volume of WP: 11,300 cu. yd.

- RADIOLOGICAL DATA -

Background Measurement (contact): 3.41 pCi/g

Background Measurement (1 meter): 15.72 uR/hr

**LEGEND:**

- + Control Point (rebar)
- Road/Jeep Trail
- ▨ Waste Pile/Stock Pile (WP)
- ▩ Pit/Rimstrip (PIT)
- Drainage/Water Body (arrow shows direction of flow)
- Site Boundary

**NOTES:**

1. Easting and Northing are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/g and/or 1 (one) meter measurements of 50 uR/hr.
3. For Backfill Sequence, Please refer to appropriate sections of the Technical Specifications and Drawing No. 2.
4. For Post reclamation contours, refer to Map No. 2.

Drawn By: T. Robbins Date: Aug. 10, 1995

Approved By: S. Dib M'In Date: 2/11/97

Revision(s): 10/24/96 - TR 2/5/97 TR

Data Collected By: Tony Whitehorse, et al.

Date(s): January 28-30, 1992

THE NAVAJO NATION \* DIVISION OF NATURAL RESOURCES  
NAVAJO ABANDONED MINE LANDS RECLAMATION DEPT.  
Tuba City Field Office \* Tuba City, Arizona 86045

**NOTES:**

The volume of the individual wastepiles and highwall grading at this site is as follows:

WP-1: 5,800 bank cubic yards

WP-2: 5,100 bank cubic yards

WP-3: 4,400 bank cubic yards

Highwall Grading: 800 bank cubic yards

**Site Earthwork:** Earthwork shall be in accordance with Section 3.4B Openpit Backfilling. Final lift shall be in accordance with Section 3.3 CLASSIFICATION OF BACKFILL MATERIAL. The major WORK ITEMS for each site are described in Section 3.2. Common WORK to be performed at each site are as follows:

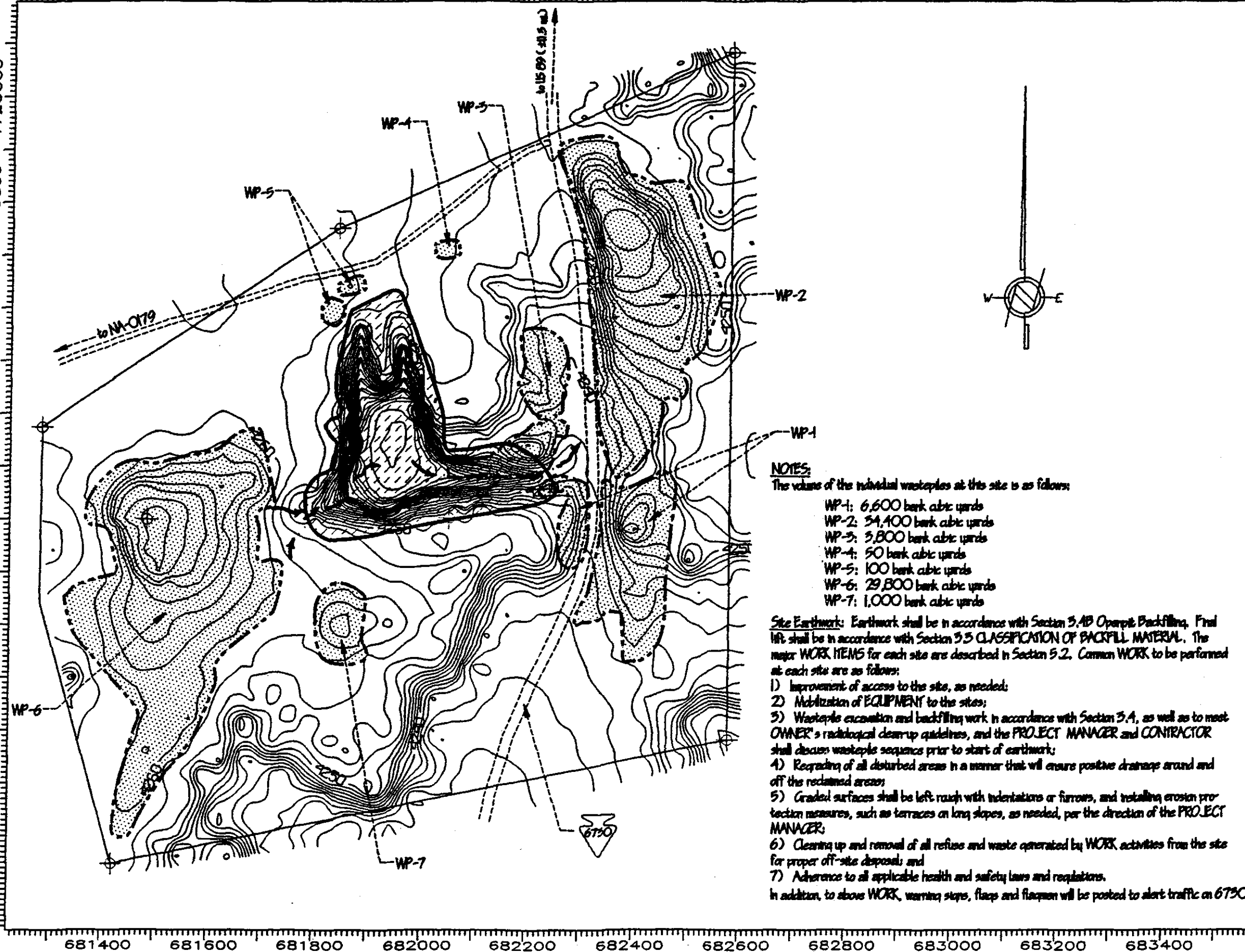
- 1) Improvement of access to the site, as needed;
- 2) Mobilization of EQUIPMENT to the sites;
- 3) Wastepile excavation and backfilling work in accordance with Section 3.4, as well as to meet OWNER's radiological cleanup guidelines, and the PROJECT MANAGER and CONTRACTOR shall discuss wastepile sequence prior to start of earthwork;
- 4) Regrading of all disturbed areas in a manner that will ensure positive drainage around and off the reclaimed areas;
- 5) Graded surfaces shall be left rough with indentations or furrows, and installing erosion protection measures, such as terraces on long slopes, as needed, per the direction of the PROJECT MANAGER;
- 6) Cleaning up and removal of all refuse and waste generated by WORK activities from the site for proper off-site disposal; and
- 7) Adherence to all applicable health and safety laws and regulations.

NORTHING

EASTING

681400 681800 681800 682000 682200 682400 682600 682800 683000 683200 683400

1720000 1719800 1719600 1719400 1719200 1719000 1718800 1718600

**NOTES:**

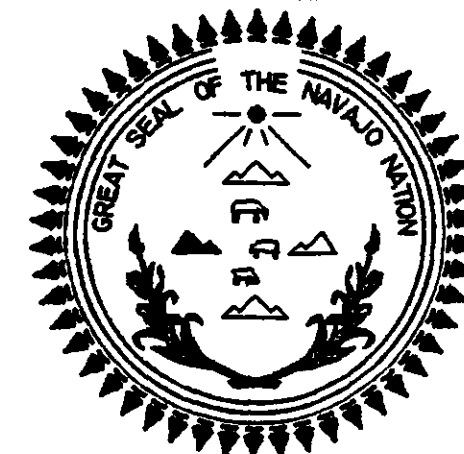
The volume of the individual wastepiles at this site is as follows:

- WP-1: 6,600 bank cubic yards
- WP-2: 54,400 bank cubic yards
- WP-3: 3,800 bank cubic yards
- WP-4: 50 bank cubic yards
- WP-5: 100 bank cubic yards
- WP-6: 29,800 bank cubic yards
- WP-7: 1,000 bank cubic yards

**Site Earthwork:** Earthwork shall be in accordance with Section 3.4B Openpit Backfilling. Final lift shall be in accordance with Section 3.5 CLASSIFICATION OF BACKFILL MATERIAL. The major WORK ITEMS for each site are described in Section 5.2. Common WORK to be performed at each site are as follows:

- 1) Improvement of access to the site, as needed;
- 2) Mobilization of EQUIPMENT to the sites;
- 3) Wastepile excavation and backfilling work in accordance with Section 3.4, as well as to meet OWNER's radiological clean-up guidelines, and the PROJECT MANAGER and CONTRACTOR shall discuss wastepile sequences prior to start of earthwork;
- 4) Regrading of all disturbed areas in a manner that will ensure positive drainage around and off the reclaimed areas;
- 5) Graded surfaces shall be left rough with indentations or furrows, and installing erosion protection measures, such as terraces on long slopes, as needed, per the direction of the PROJECT MANAGER;
- 6) Cleaning up and removal of all refuse and waste generated by WORK activities from the site for proper off-site disposal; and
- 7) Adherence to all applicable health and safety laws and regulations.

In addition, to above WORK, warning signs, flags and flagmen will be posted to alert traffic on 6750.



CAMERON AML RECLAMATION PROJECT No.3  
MAP No.12: PROJECT MAP  
NA-0180 YAZZIE No. 2

Contour Interval: 2 foot

Scale: 1 in. = 200 ft.

Site Area: 32.46 Acres

Total Volume of WP: 75,750 cu. yd.

- RADIOLOGICAL DATA -

Background Measurement (contact): 2.77 pCi/g

Background Measurement (1 meter): 12.48 uR/hr

**LEGEND:**

- Control Point (rebar)
- Road/Jeep Trail
- Waste Pile/Stock Pile (WP)
- Pit/Rimstrip (PIT)
- Drainage/Water Body (Arrows show direction of flow)
- Site Boundary

**NOTES:**

1. Easting and Northings are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/g, and/or 1 (one) meter measurements of 50 uR/hr.
3. For Backfill Sequence, Please refer to appropriate sections of the Technical Specifications and Drawing No. 2.
4. For Post reclamation contours, refer to Map No. 22.

Drawn By: T. Rabbin

Date: August 10, 1995

Approved By: S. Dela Mirm Date: 2/11/97

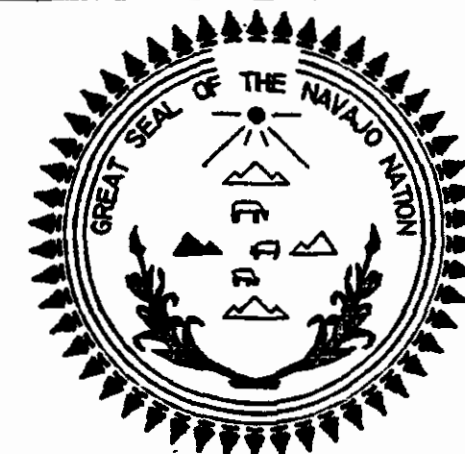
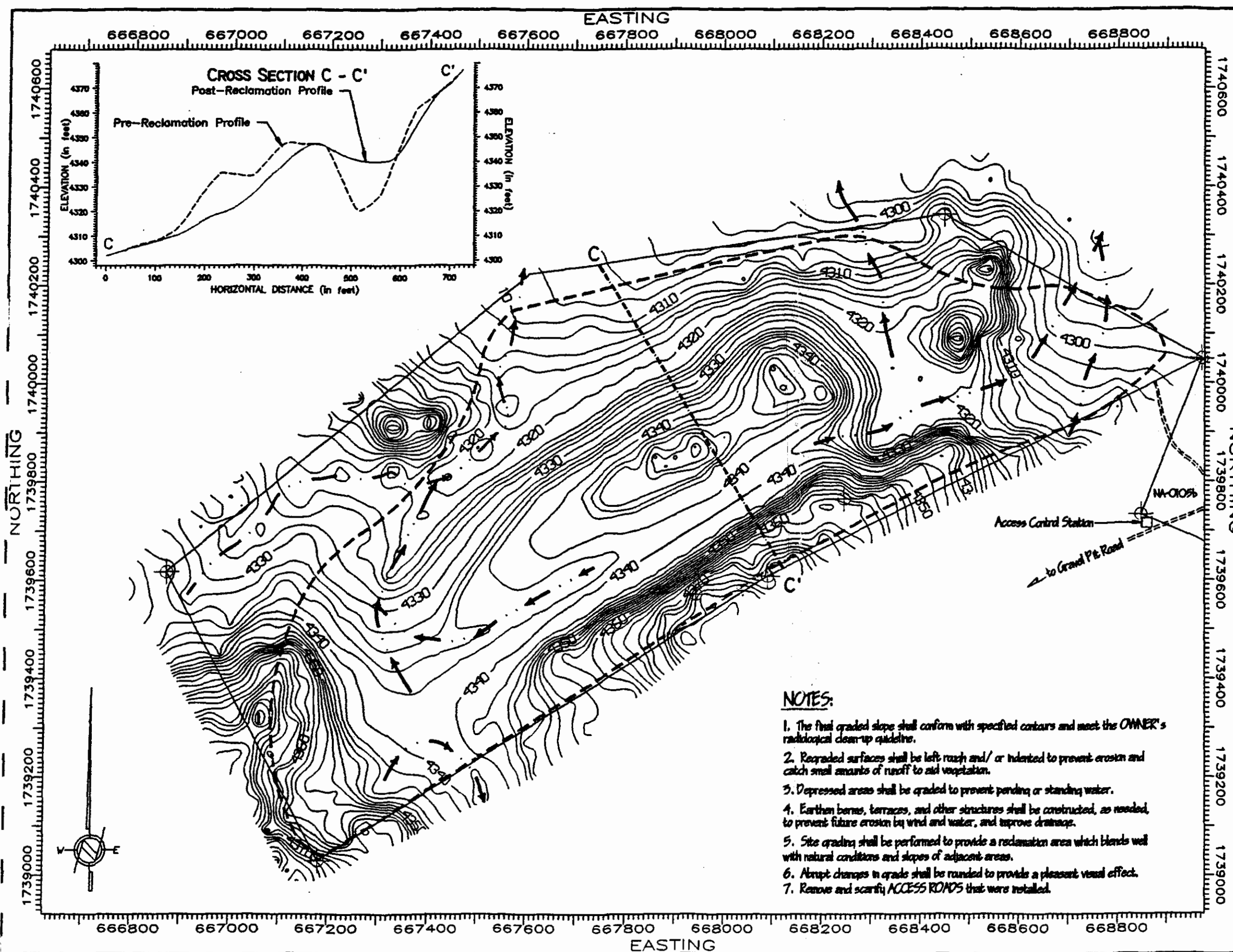
Revision(s): 10/24/96 - TR 2/5/97 JV

Data Collected By: Tony Whitehorse, et al.

Date(s): February 4-6, 1992

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CAMERON AML RECLAMATION PROJECT No. 3  
MAP No. 13: POST RECLAMATION MAP  
NA-0155a CHARLES HUSKON No. 10

Contour Interval: 2 Feet

Scale: 1 in. = 200 ft.

Site Area: 28.92 Acres

- RADIOLOGICAL DATA -

Background Measurement (contact): 6.27 pCi/g

Background Measurement (1 meter): 16.81 uR/hr

#### LEGEND:

- Control Point (rebar)
- Road/Jeep Trail
- Drainage (with direction)
- Extent of Grading
- Site Boundary

#### NOTES:

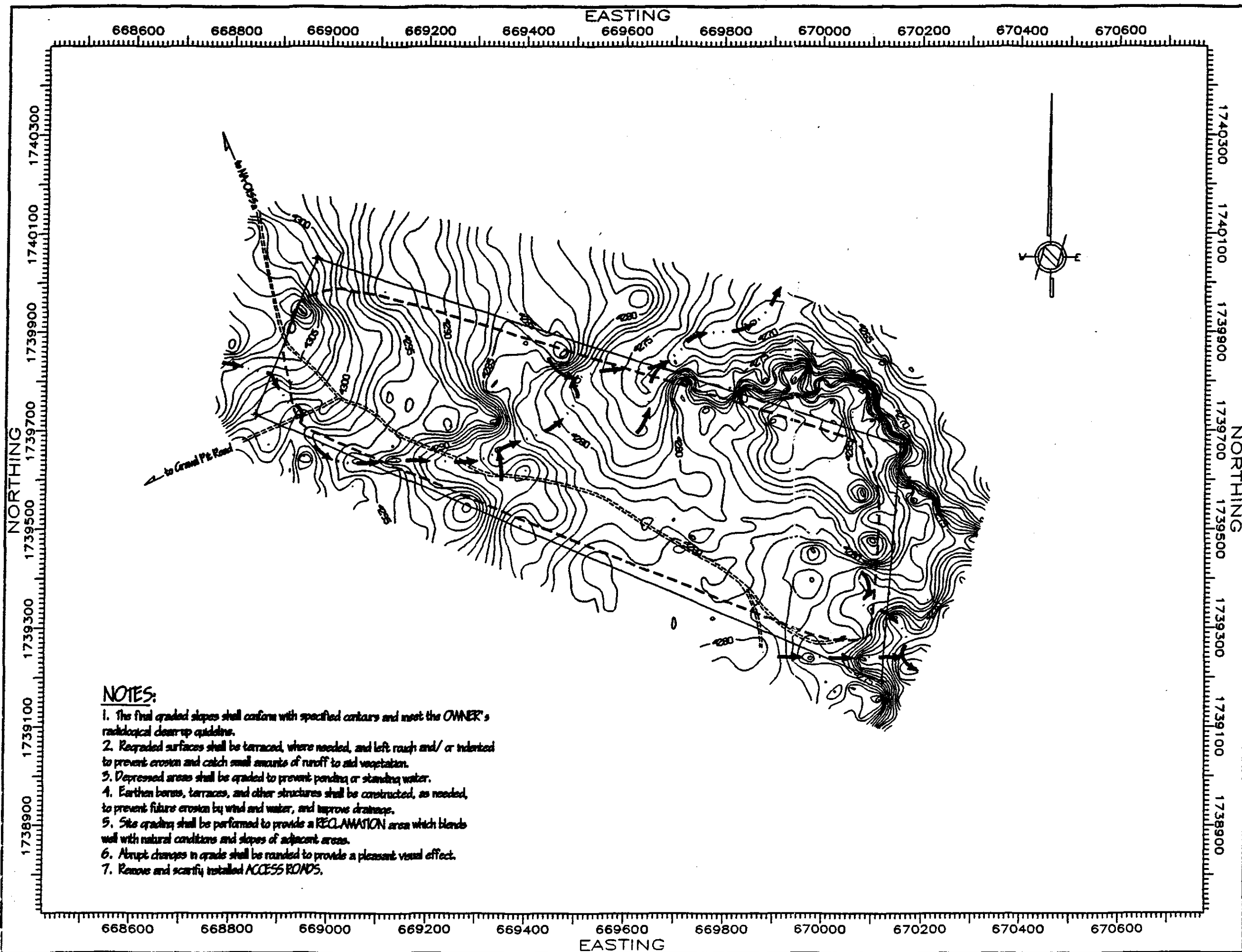
1. Easting and Northing are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/gm, and/or one (1) meter measurements of 50 uR/hr.
3. Location of post reclamation contours are approximate.
4. All final slopes shall be less than or equal to  $\frac{3}{1}$ .

Drawn By: T. Robbins Date: 28 JULY 1995

Approved By: S. DeLo Wism Date: 2/11/97

Revision(s): 10/22/96 - R 2/5/97 TR

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CAMERON AML RECLAMATION PROJECT No. 3  
MAP No. 14: POST RECLAMATION MAP  
NA-0155b CHARLES HUSKON No. 10

Contour Interval: 1 foot

Scale: 1 in. = 200 ft.

Site Area: 12.09 Acres

- RADIOLOGICAL DATA -

Background Measurement (contact): 6.99 pCi/g

Background Measurement (1 meter): 18.65 uR/hr

#### LEGEND:

- ◆ Control Point (rebar)
- Road/Jeep Trail
- Drainage (with direction)
- - - Extent of Grading
- Site Boundary

#### NOTES:

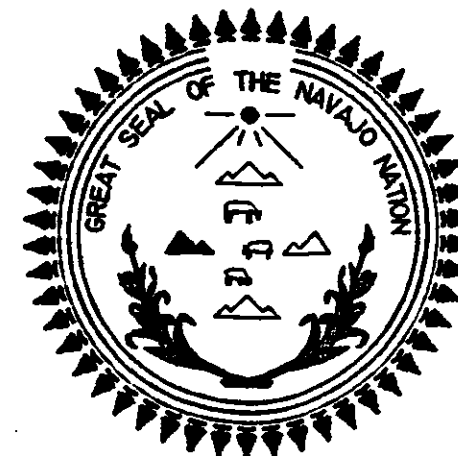
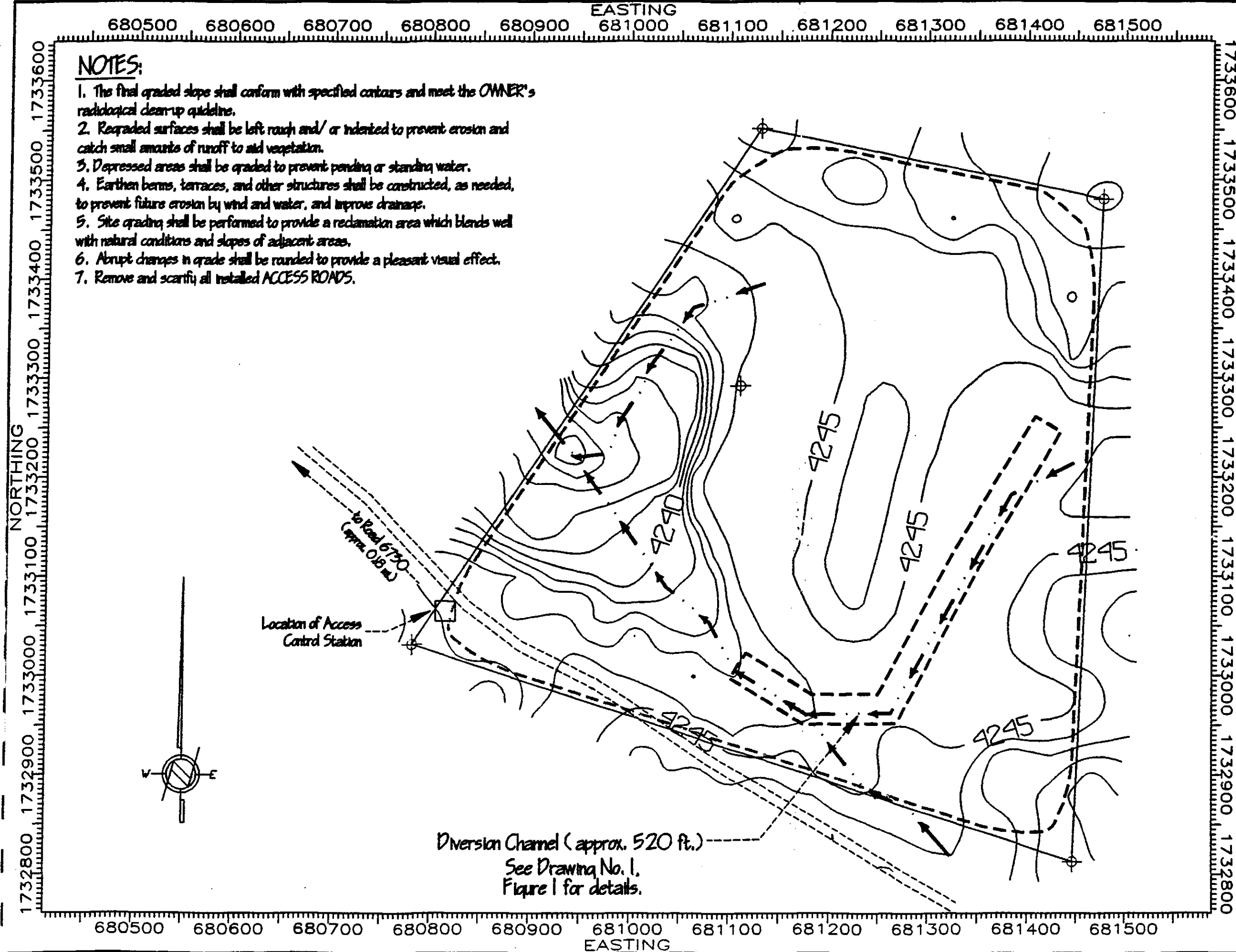
1. Easting and Northings are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/gram, and/or one (1) meter measurements of 50 uR/hour.
3. Location of post reclamation contours are approximate.
4. All final slopes shall be less than or equal to 5:1.

Drawn By: Tony Robbins Date: 28 July 1995

Approved By: S. Dubois Date: 2/11/97

Revision(s): 10/22/96-1R 2/5/97 fr

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CAMERON AML RECLAMATION PROJECT No. 3  
 MAP No.15: POST RECLAMATION MAP  
 NA-0163 RYAN No. 1

Contour Interval: 1 foot  
 Scale: 1 in. = 100 ft.  
 Site Area: 7.52 Acres  
 - RADIOLOGICAL DATA -  
 Background Measurement (contact): 256 pCi/g  
 Background Measurement (1 meter): 11.90 uR/hr

#### LEGEND:

- Control Point (rebar)
- Road/Jeep Trail
- Drainage (with direction)
- Extent of Grading
- Site Boundary

#### NOTES:

1. Easting and Northing are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/ gram, and/ or one (1) meter measurements of 50 uR/ hour.
3. Location of post reclamation contours are approximate.
4. All final slopes shall be less than or equal to 5:1.

Drawn By: Tony Robbins Date: 21 August 1995  
 Approved By: S. Deb. Mison Date: 2/11/97  
 Revision(s): 10/22/96 - 1R 2/5/97 JR

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# NOTES:

1. The final graded slope shall conform with specified contours and meet the OWNER's radiological clean-up guidelines.
2. Regraded surfaces shall be left rough and/or seeded to prevent erosion and catch small amounts of runoff to aid vegetation.
3. Depressed areas shall be graded to prevent ponding or standing water.
4. Earthen berms, terraces, and other structures shall be constructed, as needed, to prevent future erosion by wind and water, and improve drainage.
5. Site grading shall be performed to provide a RECLAMATION area which blends well with natural conditions and slopes of adjacent areas.
6. Abrupt changes in grade shall be rounded to provide a pleasant visual effect.
7. Fences will be reinstalled and repaired where needed.
8. Remove and scarify all installed ACCESS ROADS.

Borrow Area "A"  
(Approx. 600 cu. yd.)

EXCLUSION AREA - No admittance  
(personnel and/or equipment) into  
this area, except for access to WP-1  
Area is to be left undisturbed.

Borrow Area "C"  
(Approx. 1300 cu. yd.)

Borrow Area "B"  
(Approx. 1400 cu. yd.)

To Gravel Pit Road  
(Approx. 1.5 miles)

Location of Access Control Station

NAVAJO NATION  
1/4 SEC. 9, T28N, R10E

1/4 SEC. 4, T27N, R10E  
U.S. PLM LAND; Surface rights  
withdrawn by U.S. Bureau of Reclamation

BOUNDARY FENCE



CAMERON AML RECLAMATION PROJECT No. 3  
MAP No. 16: POST RECLAMATION MAP  
NA-0166 CHARLES HUSKON No. 11

Contour Interval: 2 foot

Scale: 1 in. = 200 ft.

Site Area: 27.29 Acres

- RADIOLOGICAL DATA -

Background Measurement (contact): 12.99 pCi/g

Background Measurement (1 meter): 31.34 uR/hr

## LEGEND:

- Control Point (rebar)
- Road/Jeep Trail
- Drainage (with direction)
- Extent of Grading
- Site Boundary

## NOTES:

1. Easting and Northings are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/gm, and/or one (1) meter measurements of 50 uR/hr.
3. Location of post reclamation contours are approximate.
4. All final slopes shall be less than or equal to 3:1.

Drawn By: T. Ribbon Date: 12 September 1995

Approved By: S. Deb Mirm Date: 2/11/97

Revision(s): 10/29/96 - R 2/5/97 - R

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EASTING

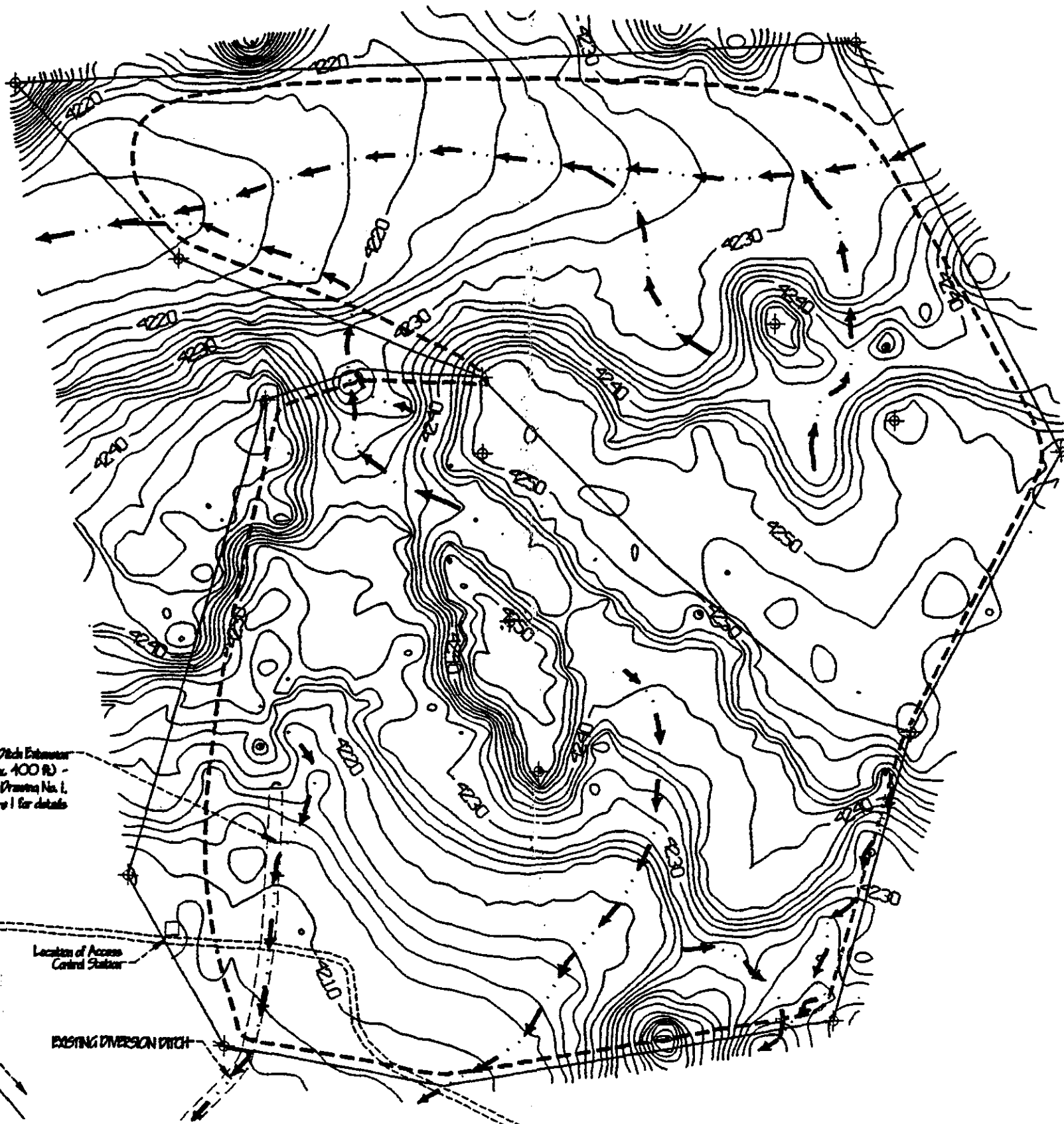
681200 681400 681600 681800 682000 682200 682400 682600 682800 683000 683200 683400

NOTES:

1. The final graded slope shall conform with specified contours and meet the OWNER's radiological cleanup guidelines.
2. Graded surfaces shall be left rough and/or vegetated to prevent erosion and catch small amounts of runoff to aid vegetation.
3. Depressed areas shall be graded to prevent ponding or standing water.
4. Earthen berms, terraces, and other structures shall be constructed, as needed, to prevent future erosion by wind and water, and improve drainage.
5. Site grading shall be performed to provide a RECLAMATION area which blends well with natural conditions and slopes of adjacent areas.
6. Abrupt changes in grade shall be rounded to provide a pleasant visual effect.
7. Remove and scarify all installed ACCESS ROADS.
8. The Radiological Background Measurements is as follows:

NA-0172a -> 4.55 pCi/g for contact  
14.57 for 1 meter.

NA-0172b -> 5.95 pCi/g for contact  
15.85 for 1 meter.



CAMERON AML RECLAMATION PROJECT No. 3  
MAP No. 17: POST RECLAMATION MAP  
NA-0172a&b RAMCO No. 21

Contour Interval: 2 foot

Scale: 1 in. = 200 ft.

Site Area: 38.79 Acres

(Total odd)

- RADIOLOGICAL DATA -

Background Measurement (contact): 4.55 pCi/g  
3.95

Background Measurement (1 meter): 14.57 uR/hr  
15.85

LEGEND:

- Control Point (rebar)
- Road/Jeep Trail
- Drainage (with direction)
- Extent of Grading
- Site Boundary

NOTES:

1. Easting and Northing are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/gram, and/or one (1) meter measurements of 50 uR/hr.
3. Location of post reclamation contours are approximate.
4. All final slopes shall be less than or equal to 3:1.

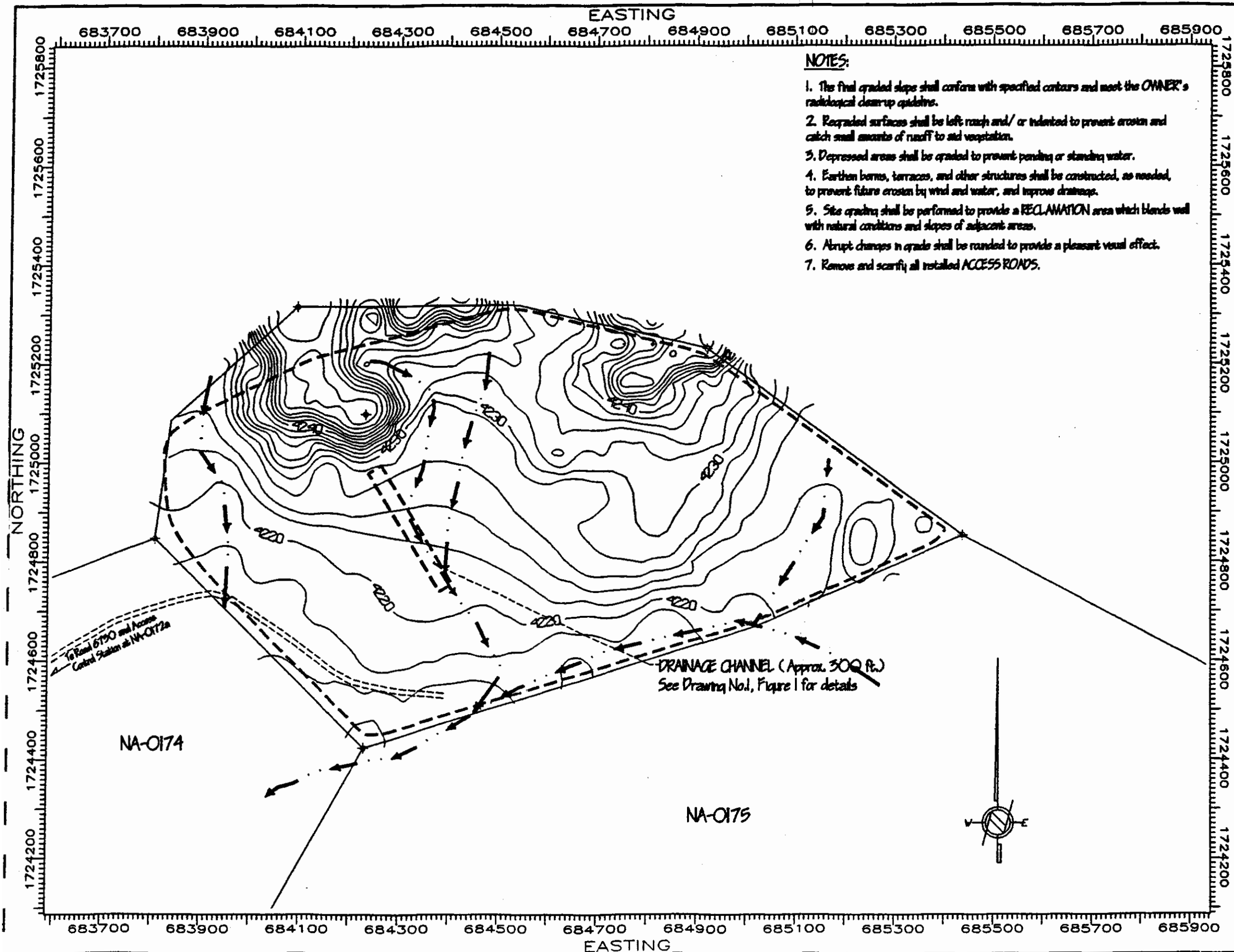
Drawn By: Kay Ribbon Date: 23 JULY 1995

Approved By: S. Dubois Date: 2/11/97

Revision(s): 10/23/96-R 4/5/97

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#### NOTES:

1. The final graded slope shall conform with specified contours and meet the OWNER's radiological clean-up guideline.
2. Regraded surfaces shall be left rough and/or indented to prevent erosion and catch small amounts of runoff to aid vegetation.
3. Depressed areas shall be graded to prevent ponding or standing water.
4. Earthen berms, terraces, and other structures shall be constructed, as needed, to prevent future erosion by wind and water, and improve drainage.
5. Site grading shall be performed to provide a RECLAMATION area which blends well with natural conditions and slopes of adjacent areas.
6. Abrupt changes in grade shall be rounded to provide a pleasant visual effect.
7. Remove and scarify all installed ACCESS ROADS.



CAMERON AML RECLAMATION PROJECT No. 3  
MAP No. 18: POST RECLAMATION MAP  
NA-0173 RAMCO No. 22

Contour Interval: 2 foot

Scale: 1 in. = 200 ft.

Site Area: 21.39 Acres

- RADIOLOGICAL DATA -

Background Measurement (contact): 4.05 pCi/g

Background Measurement (1 meter): 14.01 uR/hr

#### LEGEND:

- + Control Point (rebar)
- Road/Jeep Trail
- Drainage (with direction)
- Extent of Grading (arrows show direction of flow)
- Site Boundary

#### NOTES:

1. Easting and Northing are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/gm, and/or one (1) meter measurements of 50 uR/hr.
3. Location of post reclamation contours are approximate.
4. All final slopes shall be less than or equal to 5:1.

Drawn By: T. Robles

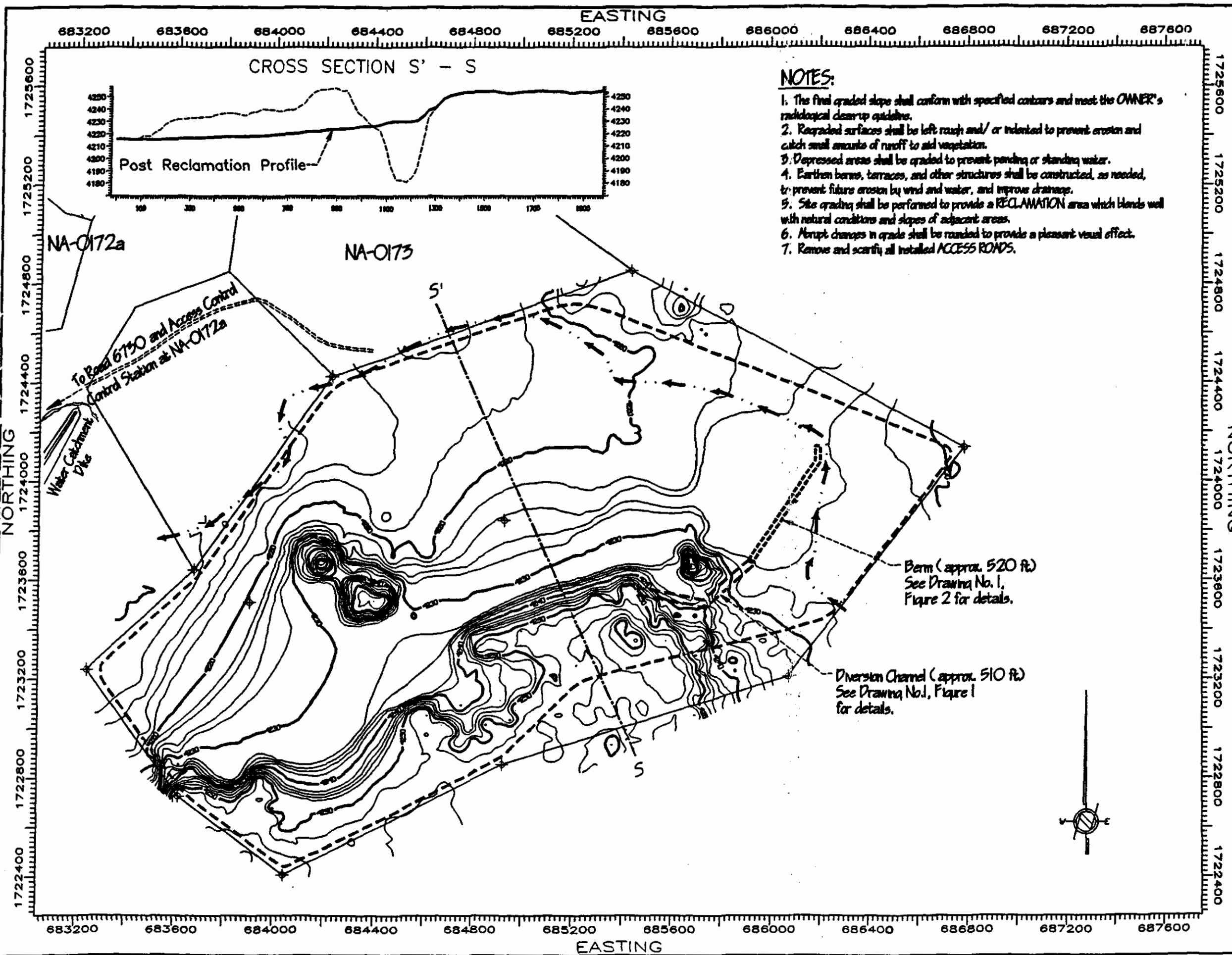
Date: 28 August 1995

Approved By: S. Del M. Date: 2/11/97

Revision(s): 10/25/96 - 1R 2/5/97

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#### NOTES:

1. The final graded slope shall conform with specified contours and meet the OWNER's radiological clean-up guidelines.
2. Regraded surfaces shall be left rough and/or indented to prevent erosion and catch small amounts of runoff to aid vegetation.
3. Depressed areas shall be graded to prevent ponding or standing water.
4. Earthen berms, terraces, and other structures shall be constructed, as needed, to prevent future erosion by wind and water, and improve drainage.
5. Site grading shall be performed to provide a RECLAMATION area which blends well with natural conditions and slopes of adjacent areas.
6. Abrupt changes in grade shall be rounded to provide a pleasant visual effect.
7. Remove and scarify all installed ACCESS ROADS.



CAMERON AML RECLAMATION PROJECT No. 3  
MAP No. 20: POST RECLAMATION MAP  
NA-0175 RYAN No. 2

Contour Interval: 2 Feet

Scale: 1 in. = 400 ft.

Site Area: 109.06 Acres

- RADIOLOGICAL DATA -

Background Measurement (contact): 364 pCi/g

Background Measurement (1 meter): 1431 uR/hr

#### LEGEND:

- ⊕ Control Point (rebar)
- == Road/Jeep Trail
- Drainage (with direction)
- - - Extent of Grading
- ~ Site Boundary

#### NOTES:

1. Easting and Northing are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/gm, and/or one (1) meter measurements of 50 uR/hr.
3. Location of post reclamation contours are approximate.
4. All final slopes shall be less than or equal to 3:1.

Drawn By: T. Robbins Date: August 9, 1995

Approved By: S. Delo Mission Date: 2/11/97

Revision(s): 10/24/96 - TR 2/5/97

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NORTHING

1719400

1719300

1719200

1719100

1719000

680600

680700

680800

680900

681000

EASTING  
681100

681200

681300

681400

681500

681600

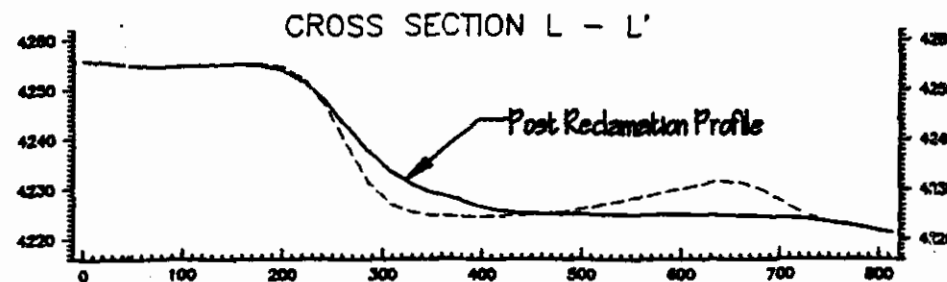
681700

1719800  
1719700  
1719600  
1719500  
1719400  
1719300  
1719200  
1719100  
1719000

NORTHING

1719200  
1719100  
1719000

EASTING

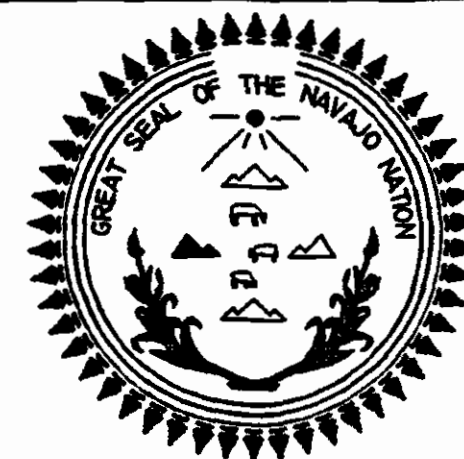


To Road 6750



## NOTES:

1. The final graded slope shall conform with specified contours and meet the OWNER's radiological clean-up guideline.
2. Regraded surfaces shall be left rough and/or indented to prevent erosion and catch small amounts of runoff to aid vegetation.
3. Depressed areas shall be graded to prevent ponding or standing water.
4. Earthen berms, terraces, and other structures shall be constructed, as needed, to prevent future erosion by wind and water, and improve drainage.
5. Site grading shall be performed to provide a RECLAMATION area which blends well with natural conditions and slopes of adjacent areas.
6. Abrupt changes in grade shall be rounded to provide a pleasant visual effect.
7. Remove and scarify all installed ACCESS ROADS.



CAMERON AML RECLAMATION PROJECT No. 3  
MAP No. 21: POST RECLAMATION MAP  
NA-0179 YAZZIE No. 1

Contour Interval: 1 Feet

Scale: 1 in. = 100 ft.

Site Area: 8.76 Acres

## - RADIOLOGICAL DATA -

Background Measurement (contact): 3.41 pCi/g

Background Measurement (1 meter): 13.72 uR/hr

## LEGEND:

- + Control Point (rebar)
- Road/Jeep Trail
- Drainage (with direction)
- Extent of Grading
- Site Boundary

## NOTES:

1. Easting and Northing are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/gm, and/or one (1) meter measurements of 50 uR/hr.
3. Location of post reclamation contours are approximate.
4. All final slopes shall be less than or equal to 5:1.

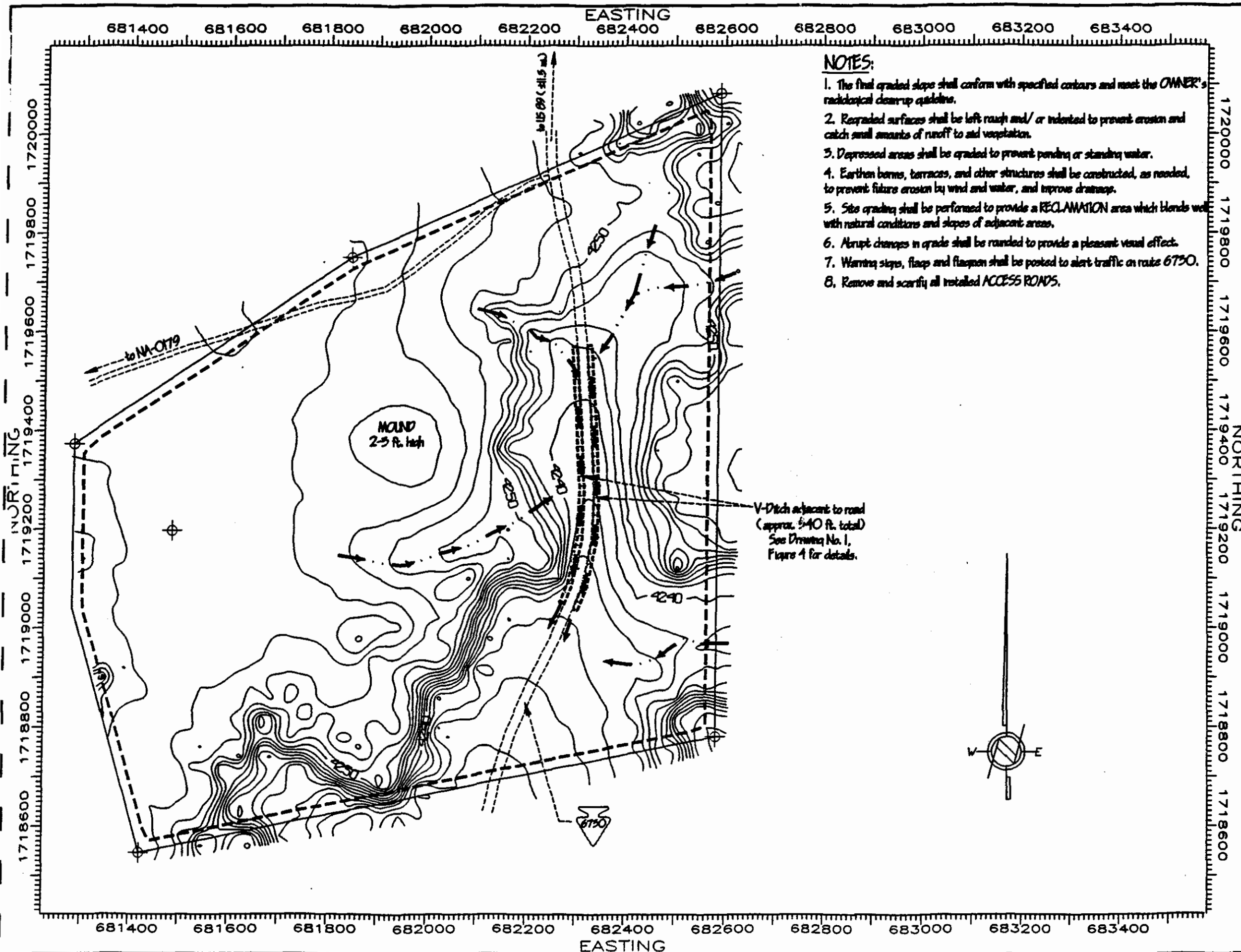
Drawn By: T. Robbins

Date: Aug. 10, 1995

Approved By: S. Deb Mign Date: 2/11/97

Revision(s): 10/24/96-TR 2/5/97 JK

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#### NOTES:

1. The final graded slope shall conform with specified contours and meet the OWNER's radiological clean-up guideline.
2. Regraded surfaces shall be left rough and/or indented to prevent erosion and catch small amounts of runoff to aid vegetation.
3. Depressed areas shall be graded to prevent ponding or standing water.
4. Earthen berms, terraces, and other structures shall be constructed, as needed, to prevent future erosion by wind and water, and improve drainage.
5. Site grading shall be performed to provide a RECLAMATION area which blends well with natural conditions and slopes of adjacent areas.
6. Abrupt changes in grade shall be rounded to provide a pleasant visual effect.
7. Warning signs, flags and flagmen shall be posted to alert traffic on route 6750.
8. Remove and scarify all installed ACCESS ROADS.



CAMERON AML RECLAMATION PROJECT No. 3  
MAP No. 22: POST RECLAMATION MAP  
NA-0180 YAZZIE No. 2

Contour Interval: 2 foot

Scale: 1 in. = 200 ft.

Site Area: 32.46 Acres

- RADIOLOGICAL DATA -

Background Measurement (contact): 277 pCi/g

Background Measurement (1 meter): 1248 uR/hr

#### LEGEND:

- Control Point (rebar)
- Road/Jeep Trail
- Drainage (with direction)
- Extent of Grading
- Site Boundary

#### NOTES:

1. Easting and Northings are in AZ State Plane (Central Zone) Grid Bearings.
2. Post reclamation radiological measurements should not exceed contact measurements of 25 pCi/gram, and/or one (1) meter measurements of 50 uR/hr.
3. Location of post reclamation contours are approximate.
4. All final slopes shall be less than or equal to 3:1.

Drawn By: T. Rabow Date: August 10, 1996

Approved By: S. Delo Mize Date: 2/11/97

Revision(s): 10/24/96 - TR 2/5/97 +

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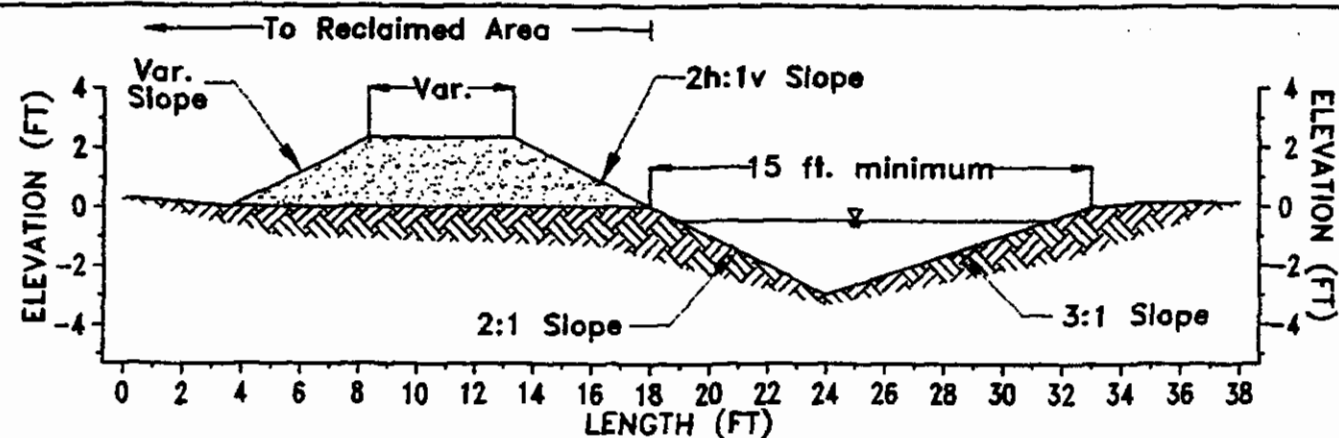


FIGURE 1: CROSS SECTION OF A DIVERSION CHANNEL (TYPICAL)

#### DESIGN CRITERIA FOR DIVERSION CHANNEL (TYPICAL)

- Cut:** The cut shall be a minimum of 15 feet in width.
- Fill:** Fill material shall be deposited between cut and reclaimed area.
- Side Slopes:** See Figure 1 for appropriate slopes.
- Compaction:** Required. Compaction of fill using the wheels or tracks of heavy equipment is adequate.
- Grade:** Varying. Diversion channel should be constructed with grade equal to adjacent ground slope.
- NOTE:** Design can be scaled down for smaller flows.

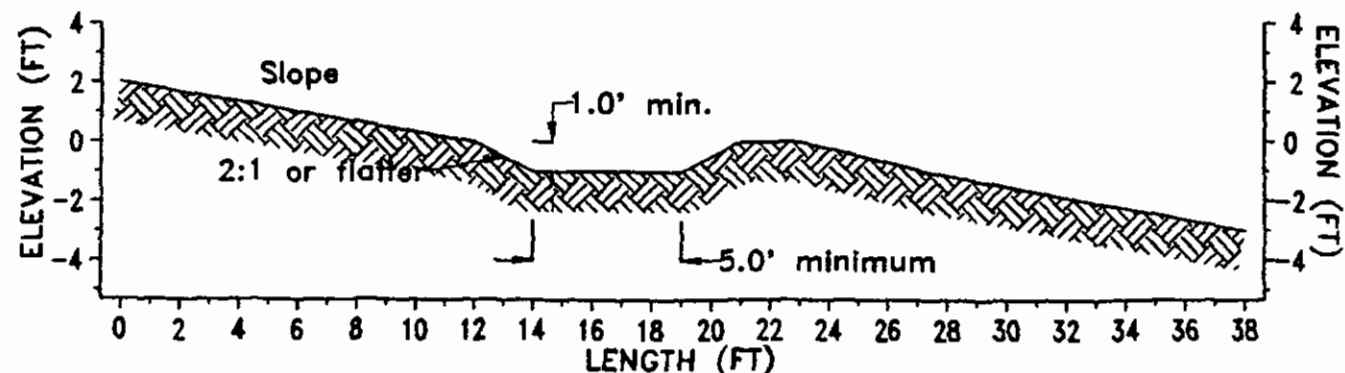


FIGURE 3: CROSS SECTION OF A TERRACE (TYPICAL)

#### DESIGN CRITERIA FOR A TERRACE (TYPICAL)

- Height:** 1.0 feet minimum measured from upslope side of cut.
- Topwidth:** Varying.
- Side Slopes:** 2:1 or flatter
- Compaction:** Required. Compaction of fill using the wheels or tracks of heavy equipment is adequate.
- Grade:** 1-2% slope in grade. Terrace should be constructed almost parallel to the contour of the upland slope and should be built into slope without cut & fill.

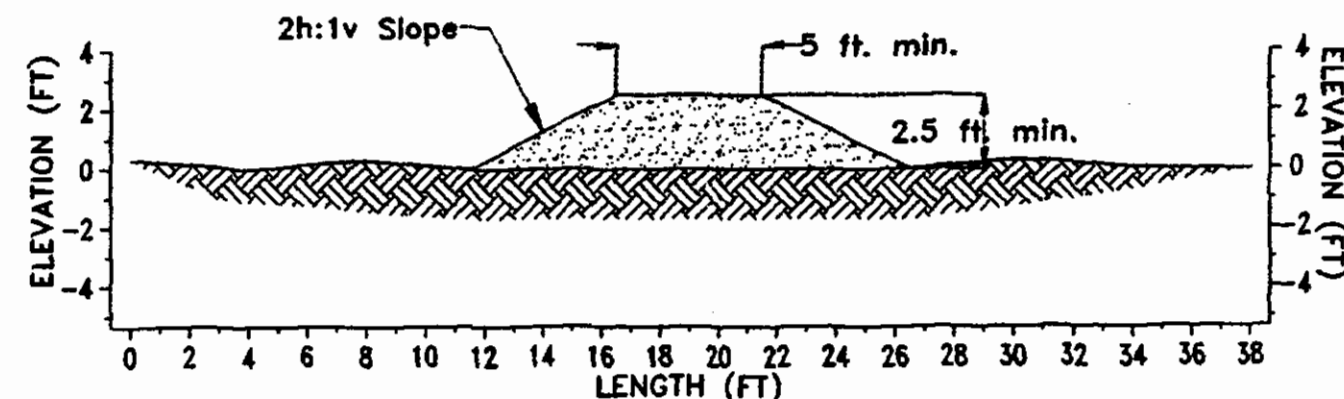


FIGURE 2: CROSS SECTION OF A BERM (TYPICAL)

#### DESIGN CRITERIA FOR A BERM (TYPICAL)

- Height:** 2.5 feet minimum measured from upslope side of berm.
- Topwidth:** 5.0 feet minimum.
- Side Slopes:** 2:1 or flatter
- Compaction:** Required. Compaction of fill using the wheels or tracks of heavy equipment is adequate.
- Grade:** Varying. Diversion channel should be constructed with grade equal to adjacent ground slope.

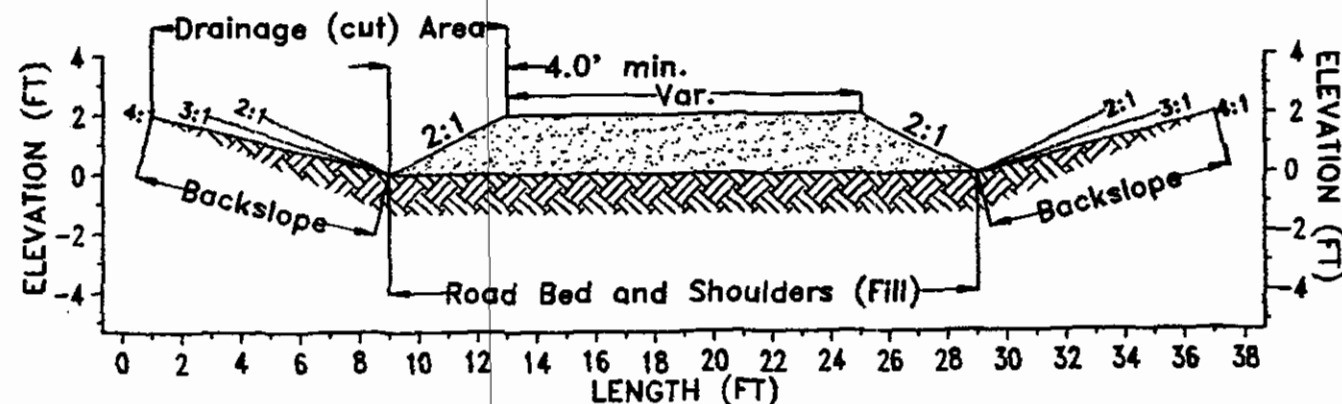


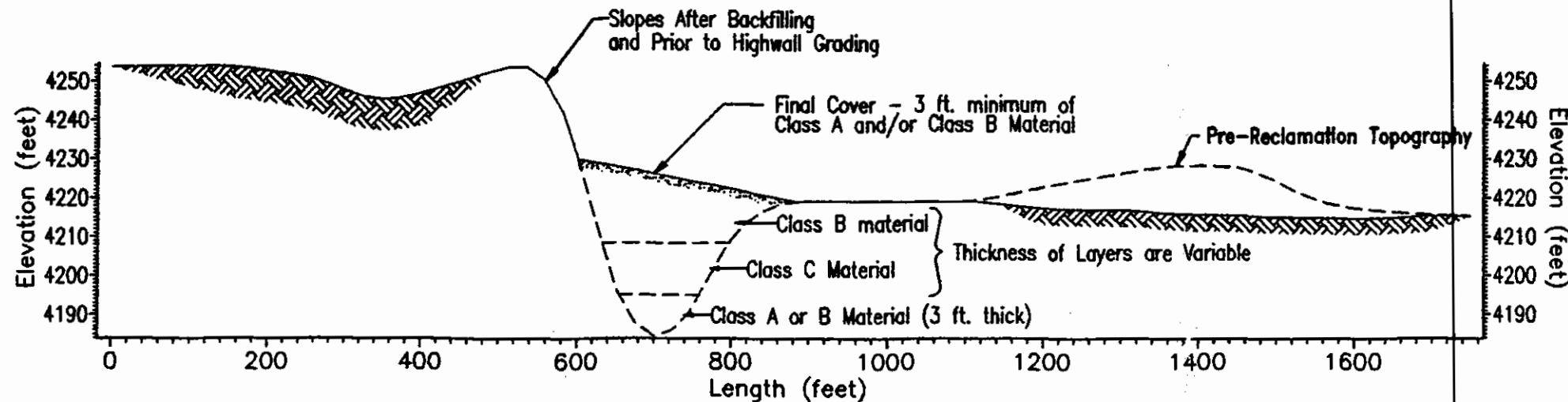
FIGURE 4: ROADWAY CROSS SECTION SHOWING V-DITCH (TYPICAL)

#### DESIGN CRITERIA FOR INSTALLING V-DITCH ROAD DRAINAGE (TYPICAL)

- Cut:** Drainage area shall be cut to slopes as shown in Figure.
- Fill:** Place material from v-ditch on road bed as fill.
- Side Slopes:** Backslopes shall be cut 4:1 if cut is less than 5 feet, 3:1 if cut is 5-10 feet, and 2:1 if cut is greater than 10 feet.
- Compaction:** Required. Compact fill on road bed using wheels or tracks of heavy equipment.
- Grade:** Equal to adjacent road bed grade.

**CAMERON AML RECLAMATION PROJECT No.3**  
**DRAWING No. 1: Terraces and Roadway Drainages**  
 Drawn By: Tony Robbins, Jr. Approved By: S. D. Mc  
 Date: 20 June 1995 7/5/97 Date: 2/11/97  
 \* THE NAVAJO NATION \* DIVISION OF NATURAL RESOURCES \*  
 NAVAJO ABANDONED MINE LAND RECLAMATION DEPARTMENT  
 \* Tuba City Field Office \* Tuba City, Arizona 86045 \*





DRAWING A: Cross Section (A-A') Showing Backfill Sequence

#### Open Pit Backfilling:

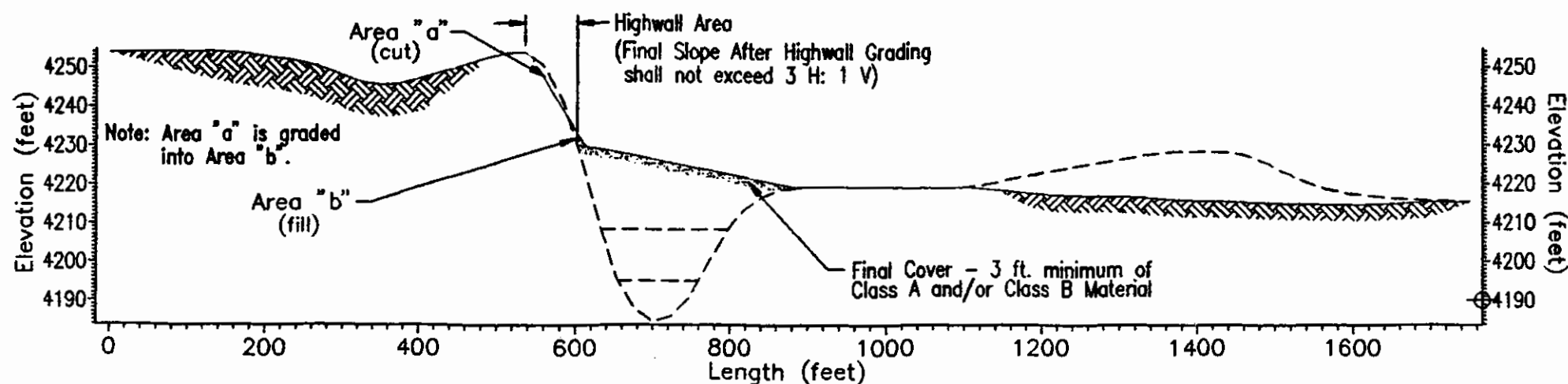
The CONTRACTOR shall excavate mine waste from wastepiles outside the rims of the open pits and use it for backfilling the open pits using the "Excavating and Backfilling Sequence". If after excavation of the wastepiles is complete and the area remains radioactive, it may have to be overexcavated and backfilled with the appropriate material to meet the Department's radiological clean-up guideline. The distribution of materials throughout a fill shall be such that there shall be no lenses, pockets, streaks or layers of material differing substantially in texture and gradation from the surrounding material in the fill. Backfill shall be compacted in layers, not to exceed 3 feet in thickness, by at least 5 passes of earthmoving equipment exerting a minimum pressure of 100 pounds per square inch. The final graded surface shall conform with the specified contours and meet the Department's radiological clean-up guideline. Water shall be used during earthmoving for dust control.

#### Typical Excavation and Backfilling Sequence:

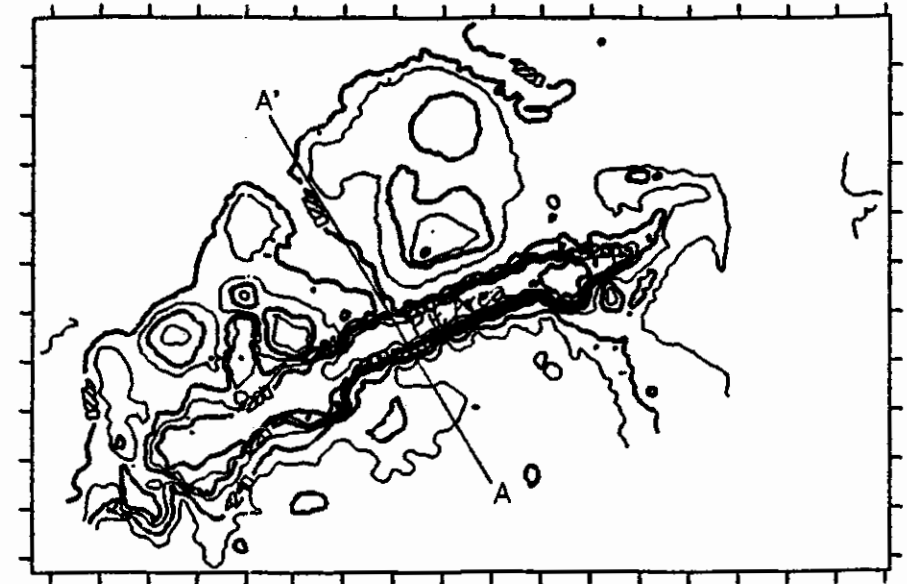
1. Class A and/or Class B material shall be excavated and placed in the bottom of the pit(s) as a buffer zone. The thickness of the layer will be at the least 3 feet in thickness.
2. Class C material shall be excavated and placed in the pit(s) on top of the Class A and/or Class B materials.
3. Class B material shall be excavated and placed in the pit(s) on the top of the Class C materials.
4. Class A and/or Class B materials from the waste piles and the replacement ponds shall be used to construct the final cover in the open pit(s).
5. The Owner reserves the right to make minor adjustments or revisions in lines or grades, if found necessary, as the construction work progresses, due to minor discrepancies in the map(s) or drawing(s) or to obtain satisfactory reclamation.

#### Highwall Grading:

Grading of highwalls to reduce their slopes shall be performed only on designated areas (at sites NA-0155a, NA-0175 and NA-0179 for a total of 12,800 cu. yds. of earthwork) where complete elimination of the highwalls are not feasible due to shortage of backfill material. The final slope of the highwalls shall not exceed 3 H:1 V. The slopes of the reclaimed areas shall smoothly blend with existing topography and the texture of the reclaimed surfaces shall be left rough and/or indented.



DRAWING B: Cross Section (A-A') Showing Highwall Grading



### CAMERON AML RECLAMATION PROJECT No.3

#### DRAWING NO. 2: Typical Cross Section of an Openpit Showing Backfill Sequence, and Highwall Grading

Drawn By: **T. ROBBINS** Approved By: **S. Deb Mison**  
 Date: **7/24/97 28 JULY 1995** Date: **2/11/97**

\* THE NAVAJO NATION \* DIVISION OF NATURAL RESOURCES \*  
 NAVAJO ABANDONED MINE LAND RECLAMATION DEPARTMENT  
 \* Tuba City Field Office \* Tuba City, Arizona 86045 \*

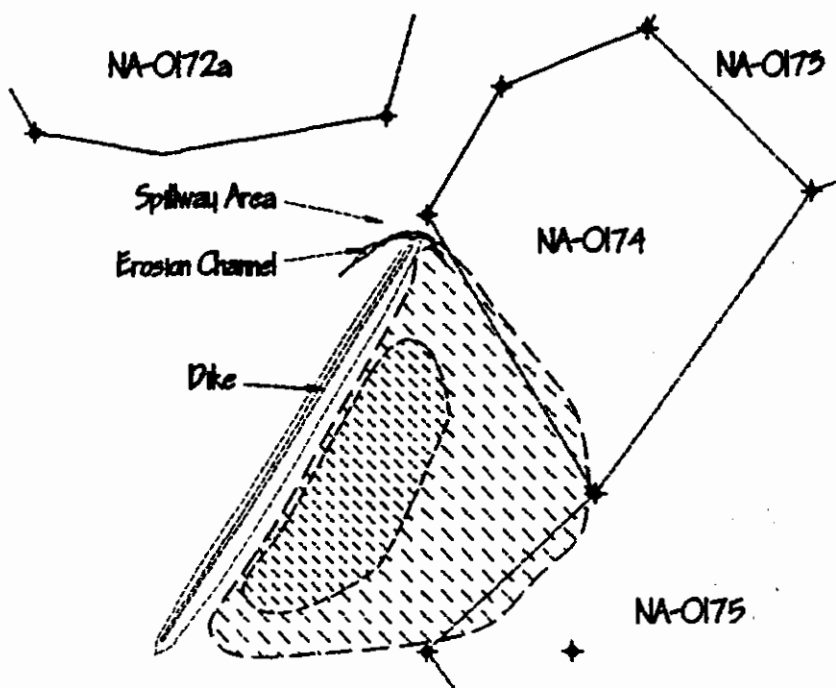


FIGURE No. 1: LOCATION OF SPILLWAY

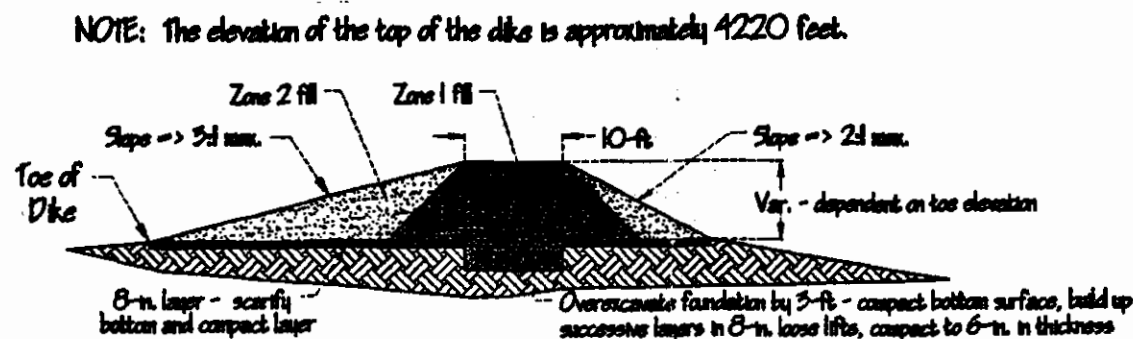


FIGURE 4b: CROSS SECTION B - B'

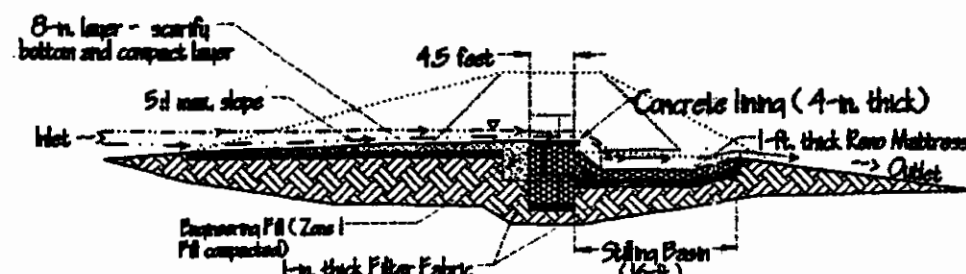


FIGURE 4a: CROSS SECTION A - A'

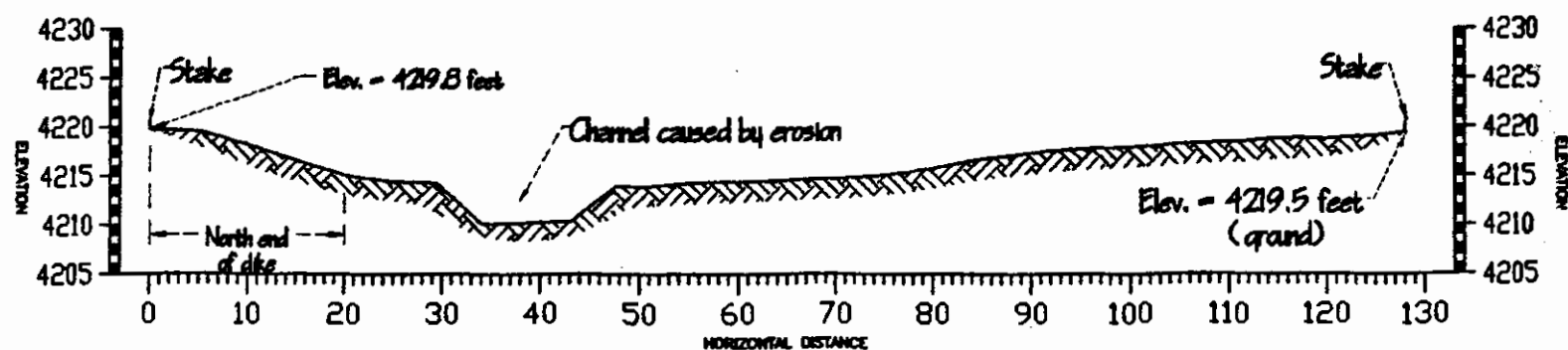


FIGURE 2: EXISTING CROSS SECTION OF NATURAL SPILLWAY AREA (C - C')  
(Spillway of dike near NA-0174)

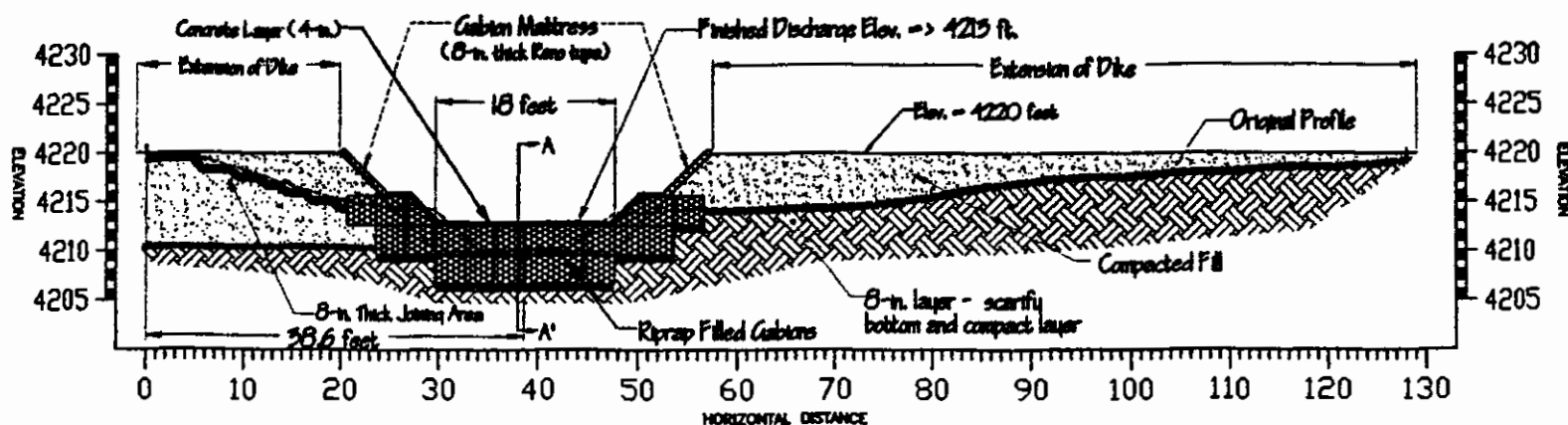


FIGURE 3: CROSS SECTION C - C' SHOWING PLACEMENT OF GABIONS

Stilling Basin  
(1-ft. thick Reno Mattress)

Gabion Spillway

Catchment Basin

Limit of Excavation

FIGURE 5: TOP VIEW OF SPILLWAY

### GENERAL NOTES:

LOCATION OF LIVESTOCK POND: Water Catchment is located 10.5 miles on Indian (B.I.A.) Route 6730, from the junction of U.S. 89 and Route 6730. The water catchment structure is west of site NA-0175 (see Figure No. 1.)

REPAIR OF SPILLWAY: Refer Section 5: Rebuilding of the Spillway Near NA-0174 for details of WORK, material specifications, and for compaction requirements.

CAMERON AML RECLAMATION PROJECT No.3	
DRAWING No. 3: Spillway Repair Near NA-0174	
Drawn By: Tony Robinson	Approved By: S. Deb Mize
Date: 28 July 1995 2/5/97	Date: 2/11/97
* THE NAVAJO NATION * DIVISION OF NATURAL RESOURCES *	
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